

EXHIBIT D

ANTHONY ACAMPORA

March 17, 2014

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION
CASE No. 4:12-CV-029494-CW

BRANDYWINE COMMUNICATIONS
TECHNOLOGIES, LLC,
Plaintiff,

DEPOSITION OF
ANTHONY ACAMPORA

vs.

AT & T CORP. AND SBC
INTERNET SERVICES, INC.
Defendants.

T R A N S C R I P T of the stenographic
notes of THERESA L. TIERNAN, a Certified Court Reporter
and Notary Public, taken at the offices of KILPATRICK
TOWNSEND, THE GRACE BUILDING, 1114 AVENUE OF THE
AMERICAS, NEW YORK, NEW YORK, on MONDAY, MARCH 17,
2014, commencing at 9:54 a.m.

ANTHONY ACAMPORA

March 17, 2014

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1 I N D E X

2 WITNESS DIR CRS RED REC

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4 BY: MR. SUN 4

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6 E X H I B I T S

7	NUMBER	DESCRIPTION	IDENT
8	EXHIBIT 1	CURRICULUM VITAE	5
9	EXHIBIT 2	ACAMPORA EXPERT REPORT	13
10	EXHIBIT 3	REBUTTAL EXPERT REPORT BURD	
11	EXHIBIT 4	BREMER PATENT	17
12	EXHIBIT 5	PALM PATENT	37
13	EXHIBIT 6	MCHALE PATENT	52
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1 A N T H O N Y A C A M P O R A, residing at 6473
2 Avenida Cresta, La Jolla, California, 92037, having
3 been duly sworn, testifies as follows:

4 EXAMINATION

5 BY MR. SUN:

6 Q Good morning, Doctor.

7 A Good morning.

8 Q I know you've been deposed before. I
9 just to go over some ground rules. So this will
10 probably be a repeat for you. But I will be asking
11 you some questions today.

12 So AT & T's counsel is here, he may
13 object, but unless he instructs you not to answer,
14 you're expected to answer.

15 Do you understand that?

16 A I do.

17 Q So there's a court reporter here
18 transcribing your answers, so it's important not to
19 talk over each other.

20 Do you understand?

21 A I do.

22 Q And I need verbal answers from you, not
23 just a nod or shake of your head.

24 Do you understand that?

25 A I do.

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1 Q If you don't understand, please let me
2 know. Okay?

3 A Okay.

4 Q And if you answer a question, I'll
5 assume that you understood it.

6 Is that fair?

7 A Sure.

8 Q If you need a break or are
9 uncomfortable, just let me know. We can take a
10 break at a natural breaking point.

11 A Good.

12 Q And is there any reason you can't give
13 your full and accurate testimony today?

14 A No.

15 Q Thank you.

16 MR. SUN: I would like to mark as
17 Exhibit 1, I believe Dr. Acampora's CV, which is
18 attached to his expert report that he provided in
19 this case.

20 (Exhibit received and marked EXHIBIT 1 for
21 identification.)

22 BY MR. SUN:

23 Q I notice you have another copy of a --
24 is that your expert report there?

25 A It is.

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1 Q Okay. Does it have the exhibits on
2 there or no?

3 A It does not.

4 Q Okay. That's fine. Okay. So if you
5 can look at Exhibit 1.

6 So this appears to be a copy of your
7 CV, correct?

8 A It is.

9 Q And does everything appear to be
10 correct from your superficially looking at this?

11 A From the superficial inspection, it appears
12 to be correct, yes.

13 Q I just want to go over briefly your
14 history -- your work history.

15 What do you currently do for a living,
16 Dr. Acampora?

17 A I'm currently professor of electrical
18 computer engineering emeritus at UC San Diego, which
19 means that I pursue research electively, I teach
20 electively, I supervise students electively, and
21 most of my time is spent consulting.

22 Q Okay.

23 You've been doing that since 2008?

24 A That's correct, I believe I formally retired
25 from UCSD in December of 2007.

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1 Q Okay. And prior to 2007, you were a
2 regular member of the faculty at UCSD?

3 A That's correct. I was a professor of
4 electrical and computer engineering with full
5 faculty responsibilities, teaching, research,
6 doctoral student supervision and administer of work,
7 yes.

8 Q Okay.

9 So looking at your description of
10 responsibilities on page 1, the bottom of page 1
11 there, just what have been your primary areas of
12 responsibility in the past several years since 2008?

13 A At UCSD?

14 Q Yes.

15 A Well, as I said, I retired in December of
16 2007, so I have no formal responsibilities
17 whatsoever.

18 But I have taught my graduate-level course in
19 wireless networks. I finished up my remaining three
20 or four PhD students, and I continued to conduct
21 research.

22 Q So the research that you have still
23 been conducting, what areas do they relate to?

24 A Mostly in the field of wireless
25 communications --

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1 Q Okay.

2 A -- and last-mile problems.

3 Q And what specifically was your research
4 with respect to last-mile problems?

5 A Well, last mile takes a variety of forms, and
6 what I've been looking at is the use of free space
7 optics to bridge the last mile.

8 Q Is that referring to optical networks?

9 A Well, optical networks means something a
10 little different. That would be cabled optical
11 networks.

12 What I've been looking at as far as last-mile
13 solution has been free space optical networks,
14 different topic.

15 Q Okay. So they're not cabled networks?

16 A No, they're not cabled. In fact, we tend to
17 avoid cabling.

18 Q Have you been doing any research on
19 DSL-related technology in the past several years?

20 A No.

21 Q What about spectrum management, have
22 you done any research related to that in the past
23 few years?

24 A As far as radio is concerned -- I'm not sure
25 I would say that I've been doing work on spectrum

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1 management so much as respecting spectrum
2 management. There really isn't much work to be done
3 except routine things, such as ensuring that
4 spectrum management rules are obeyed.

5 Q Okay. And what about from 2000 to
6 2007, have you done any work related to DSL during
7 that time period?

8 A Well, by "work," do you mean research?

9 Q Yes. Research.

10 A No, I have not done -- you're asking in 2000
11 to 2007 in particular?

12 Q Yes.

13 A I have not done research on DSL, but my
14 graduate-level course, which is focused on wireless
15 networks, has a DSL module in it --

16 Q Okay.

17 A -- because understandably, with wireless
18 communications being one form of last-mile solution,
19 I try to expose the students to all other forms of
20 last-mile solutions so that they get an
21 understanding of what the different opportunities
22 are and what the different technologies are.

23 So DSL is part of a module in my
24 graduate-level course.

25 Q Understood. Thank you.

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1 Is there anything you've done related
2 to DSL that's not -- that you haven't discussed in
3 the past ten years or so?

4 A I'm not sure I understand the question.

5 Q So I think you mentioned teaching a
6 class and also research.

7 Is there something other than that
8 that's related to DSL that you've been involved with
9 in the past ten years?

10 A I guess I'm not quite sure how to answer that
11 question.

12 I certainly keep up with the subject. Many
13 of my colleagues have worked, and some continue to
14 work, on DSL. I consult with them. I follow the
15 literature. I guess I've given a lot of thought to
16 DSL, and especially more recently as the wireless
17 field has embraced optical regarding frequency
18 division multiplexing as one of its physical layer
19 technologies, I've gotten more closely -- I've
20 reviewed more of the DSL work, because the
21 technologies are very, very, very related.

22 Q Okay. Okay. Thank you.

23 But you haven't done any specific
24 commercial consulting related to DSL in the past ten
25 years?

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1 A No, no, that's a different question.
2 Yeah, I have.
3 Q Okay. When was that about?
4 A It's most been mostly in the field of what
5 I'm doing in this matter. I've been engaged as --
6 as an expert in matters involving DSL.
7 Q In litigation?
8 A Yes.
9 Q Okay.
10 A Yes.
11 Q How many cases have you consulted on
12 involving DSL?
13 A Three or four.
14 Q Is this within the past five years?
15 A Within the past five years.
16 Q Okay. Now, Dr. Acampora, you're not an
17 attorney, correct?
18 A That is correct.
19 Q Okay. And you don't have a law degree?
20 A That is correct.
21 Q You haven't had any formal training as
22 a lawyer?
23 A That is correct.
24 Q Okay. Okay.
25 I understand you've been hired as an

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1 expert by AT & T International in this case. Is
2 that right?

3 A That is correct.

4 Q And you've provided some opinions
5 regarding the validity or invalidity of the two
6 patents in this case?

7 A That's correct.

8 Q And these patents are U.S. Patents
9 6,970,501 and 7,794,472, correct?

10 A Are you asking me that as a question?

11 Q Yes.

12 A If you don't mind --

13 Q No problem.

14 A -- repeating those numbers --

15 Q Okay.

16 A -- only because I have not memorized them and
17 given a chance to look at them in my report.

18 Q Right. I think I misspoke.

19 So 6,970,501?

20 A That's one of them.

21 Q 7,894,472?

22 A That's the other one, yes.

23 Q Great.

24 And -- so you have authored an expert
25 report containing your opinions, correct?

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1 A Correct.

2 Q And is your -- what you're holding
3 there in front of you, you brought a copy of your
4 report?

5 A I did.

6 Q Okay.

7 MR. SUN: Could we mark that as
8 Exhibit 2?

9 MR. REED: Sure, or do you have a fresh
10 copy?

11 MR. SUN: I do, but since this is the
12 copy he's relying on, I'll just mark that.

13 MR. REED: That's fine.

14 (Exhibit received and marked EXHIBIT 2 for
15 identification.)

16 MR. REED: Unless you wanted it as a
17 souvenir.

18 THE WITNESS: No, no, no, that's quite
19 all right.

20 MR. SUN: I might be reading off this.

21 BY MR. SUN:

22 Q Now, Dr. Acampora, has any of your
23 opinions changed since you published this report?

24 A No.

25 Q Are there any additional opinions that

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1 you formed since you first published this report?
2 A Well, I'm not sure quite how to answer that
3 question. You mean with regard to validity?
4 Q Correct.
5 A No.
6 Q What about invalidity?
7 A When I said, validity or invalidity, no.
8 Q Oh, okay.
9 A But I've formed other opinions, sure.
10 Q Oh, okay.
11 Have you formed opinions regarding --
12 with regards to infringement in this case?
13 A None.
14 Q Okay. Do you understand that
15 Brandywine, who is the plaintiff in this case, has
16 an expert named Nick Burd -- Nicholas Burd?
17 A Yes.
18 Q Are you aware that he's produced a
19 rebuttal report in response to your report?
20 A I have -- I am aware.
21 Q Have you reviewed this report?
22 A I have.
23 Q Okay. Have you formed any opinions in
24 response to his report?
25 A Well, yeah, that's one of the reasons I

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1 paused when you asked the question as to whether I
2 formed opinions since I wrote my report, and I said
3 no, not with regard to validity or infringement.

4 I certainly formed opinions with regard to
5 what the Brandywine expert report said --

6 Q Uh-huh. Okay.

7 A -- and I disagreed with much of what he said.

8 MR. SUN: I'm just going to get an
9 exhibit.

10 So let's mark as Exhibit 3 the rebuttal
11 expert report of Dr. Nicholas Burd.

12 (Exhibit received and marked EXHIBIT 3 for
13 identification.)

14 BY MR. SUN:

15 Q Now, I just want to start with your
16 report for the time being.

17 Before we get into this, do you have a
18 general understanding of what spectrum management
19 classes are in the context of these patents?

20 A I'm not sure I fully understand that
21 question.

22 You say in the context of these patents, you
23 mean in terms of what's disclosed in the patents?

24 Q I mean, what spectrum management
25 classes are, what they mean as part of the claims.

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1 A Well, okay, that -- that's actually a pretty
2 broad question.

3 I'm not sure that I do have an understanding
4 or that there is any understanding what spectrum
5 management classes mean as part of the claims.

6 Do I have an understanding what spectrum
7 management classes are today, sitting here? Sure.
8 And that's why I asked earlier do you mean in the
9 context of the patents or more generally?

10 Q Okay. Let's talk just briefly about
11 generally, outside of the patents.

12 In the DSL world, what are spectrum
13 management classes, as you understand it?

14 A Okay. It was recognized fairly early on that
15 with the proliferation of DSL standards and the fact
16 that DSL modems would be sharing the same copper
17 wire bundles with other services, including voice,
18 including voice band data, including ISDN, numerous
19 other services that are provided over copper wire to
20 subscribers, there would be a need -- or there may
21 be a need to create some guidelines that future
22 generations of -- not just DSL but any new
23 technology that would be sharing the same copper
24 wire bundles might adhere to so they didn't
25 unacceptably cause cross-talk interference one to

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1 the other.

2 And the -- and the ANSI -- American National
3 Standard Institute actually set about creating
4 classes, spectrum management classes, that, based
5 upon some very rigorous simulations and calculations
6 would be reasonably -- if one would deploy -- if one
7 were to deploy a device conforming with any of these
8 classes, there would be a reasonable degree of
9 confidence that unacceptable cross talk would not be
10 induced into neighboring wires interfering with
11 so-called basis services -- a set of basis services.

12 Q Okay. Thank you.

13 And is that explanation different than
14 how you understand the spectrum management classes
15 as they're described in the patent?

16 A Can I see the patents, please?

17 Q Sure.

18 MR. SUN: We'll be on 4 and 5,
19 exhibits?

20 Mark as Exhibit 4 the '501 patent.

21 (Exhibit received and marked EXHIBIT 4 for
22 identification.)

23 MR. SUN: Could you repeat the
24 question, please?

25 (Stenographer reads back as requested.)

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1 A Okay. So, again, I'm not quite sure how to
2 interpret that question, but let me give you at
3 least one answer to the question you asked.

4 If we look at Claim 1 as an example, Claim 1
5 of the '501 patent, part of that claim includes one
6 or more spectrum management classes defined by a
7 standard. And each spectrum management class
8 defining how a spectral density requirements, and
9 then the claim goes on.

10 I think that there's a real problem
11 associated with what I just read because when I go
12 back -- and now I'm looking strictly at the -- at
13 the patent, the context of the patent -- the claim
14 refers to spectrum management classes defined by a
15 standard. But at the time of the filing date of
16 this patent, there was no standard.

17 So, in that sense, I don't think I
18 understand -- in fact, I know I do not understand
19 just what the spectrum management classes are.
20 Because they, as claimed, they need to be defined by
21 a standard and there was no such standard.

22 Q Okay.

23 A So in that sense, I did not understand the
24 spectrum management classes that are claimed.

25 Q Just putting aside the specifics of any

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1 particular standard, you just described outside of
2 the patent that there's a concept of spectrum
3 management classes.

4 Is that your --

5 A No, I said, today, as I sit here today, do I
6 understand what spectrum management classes are? I
7 do.

8 Q But that is not the same and in your
9 mind as what spectrum management classes are as
10 they're recited in the claims?

11 A That's correct, because the claims do not
12 speak of spectrum management classes, they speak of
13 spectrum management classes defined by a standard.
14 And at the time of the filing of this patent, there
15 was no standard.

16 So even if spectrum management classes
17 eventually emerged, what those classes are -- what
18 the definition of those classes are that might have
19 emerged was not known when this patent was filed.

20 So I could not tell you what the spectrum
21 management referenced. If you asked me -- give
22 me -- give me the -- how a spectral density and
23 other features of one of the spectrum management
24 classes claimed by this patent, I could not tell
25 you, because there was no such standard.

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1 Q But there is still a concept of such
2 classes at the time of the filing, correct?

3 A I don't know what you mean by the "concept of
4 classes."

5 Q What I mean is just what you
6 explained -- what spectrum management classes are
7 outside of this patent, you explained that your
8 classes -- guidelines that's intended to -- to
9 minimize cross talk between various basis systems.
10 Do you remember that?

11 A Well, you paraphrased a little bit of what I
12 said, you know, but I understand what my response
13 was.

14 And today, it's a fairly well-known concept.
15 Then it was an emerging concept. There was a
16 standards body. There was even a draft standard.

17 So in terms of what the objectives of the
18 standardization body -- of the standards body was,
19 what was their objective, I think that their
20 objective was to create specific classes -- a set of
21 classes that had, as I said earlier, some
22 reasonable -- they would give a user -- or deploy a
23 reasonable assurance that if what was being deployed
24 conformed with one of these guidelines -- and there
25 would be several guidelines in a set defining these

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1 classes -- then interference with these bases system
2 would have been acceptable most of the time.

3 Q Okay. But that's not what you believe
4 spectrum management classes are as they're recited
5 in this claim?

6 A Well, as I said, these spectrum management
7 classes are defined by a standard.

8 If this patent had been written five years
9 later, that might have been understandable because
10 by that point there was a standard. But at the time
11 it was filed, there was no standard. I don't think
12 that one would have known what the claimed spectrum
13 management classes are, because there were none.

14 Q Okay. Okay. So we'll get to that
15 later.

16 So I understand AT & T's position is,
17 because of this term -- this term itself is
18 indefinite, but I also -- I also know that
19 Brandywine has a construction -- has proposed a
20 construction of spectrum management classes.

21 Is that your understanding?

22 A Yes.

23 Q Okay. So I know you did some prior art
24 analysis of these claims.

25 Were you using Brandywine's

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1 construction of the term, when you compared the
2 claims to the prior art?

3 A I did.

4 Q Now, I understand Dr. Burd in his
5 rebuttal report has offered some further refinements
6 on the meaning of spectrum management classes, if we
7 can take a look at that. Look at Dr. Burd's report.
8 Pages starting at 17.

9 So starting at page 17, at the very
10 bottom it says, "Before delving into a discussion of
11 Palm, it is useful to provide an explanation of the
12 concept of spectrum management classes as they are
13 disclosed in the patents in suit."

14 And then on page 18, there's a
15 paragraph starting with "first" and a paragraph
16 starting with "second."

17 Do you see those?

18 Just take a minute to read through that
19 page.

20 A How far do you want me to read?

21 Q Just to the very top of page 19.

22 A Okay.

23 Q So, I think there are two points being
24 made here. First, Dr. Burd says, "It is useful to
25 understand that the spectrum management classes

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1 described in the patents in suit are understood to
2 be spectrally compatible with one another."

3 Do you agree with that?

4 A And, actually, I do not agree with that.

5 Q Can you explain why?

6 A Well, the patent refers to a draft standard.

7 Now, can I see that draft standard? I just
8 want to be sure that what I'm about to say is
9 accurate. I know that what I'm about to say appears
10 in the issued standard. I don't know if it appears
11 in the draft standard.

12 Q I'm sorry, I don't have a copy of that?

13 A Then I might not be able to complete my
14 answer.

15 What I can tell you is that with regard to
16 the issued standard, not the draft standard but the
17 issued standard, if -- let's go back to Dr. Burd.

18 He refers to spectrum as -- his sentence
19 reads, "First, it is useful to understand that the
20 spectrum management classes described in the patents
21 in suit were understood to be spectrally compatible
22 with one another."

23 Now, the problem I'm having in not having
24 access to the draft standard is I'm not sure just
25 what the draft standard said on this subject,

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1 because that's the only basis for spectrum
2 management that's brought up in the patent at all,
3 that draft standard.

4 The issued standard makes it clear that the
5 intent of the spectrum management classes is to
6 ensure that -- how does -- how is the spectrum
7 management class created?

8 There is an exhaustive set of calculations
9 and simulations performed under a variety of
10 assumptions to assure that if certain criteria are
11 met by this device under test, there will -- most --
12 most of the time it will not be unacceptable
13 interference caused by basis -- a set of basis
14 services.

15 Those basis services may not include other
16 members of the spectrum management class, may or may
17 not. In fact, the patent -- the standard at issue
18 that I believe makes it clear -- and if I had a copy
19 of it, I could make certain of this -- that the
20 basis, that may expand with time by including
21 previously -- previously defined -- a previously
22 defined spectrum management class, and only then
23 would future classes be created in such a way that
24 the introduction of a new service complying with a
25 future class would be guaranteed to, most of the

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1 time, not unacceptably interfere with any of the
2 basis services, including a basis service that
3 conformed with an earlier spectrum management class.

4 First, that earlier spectrum management class
5 must be accepted as a basis before you can say
6 anything about a future spectrum management class
7 being compatible with it.

8 Q Uh-huh.

9 A So if that language appears also in the draft
10 standard, which is the only basis for spectrum
11 management classes created in this -- in the patent
12 itself, that -- if that intent is reflected in that
13 draft standard -- and I don't know if it is, but if
14 it is, I would have to disagree with what Dr. Burd
15 says here, because it's, strictly speaking, not
16 true.

17 Q So if we change the sentence to say --
18 instead of saying, "described in the patents in
19 suit," but if we change that part to say, "described
20 in the issued standard," would you -- would you
21 agree the spectrum management classes described in
22 the issued standard are understood to be spectrally
23 compatible with one another?

24 A No, no. I just explained why. It's only --
25 it depends on what point in time.

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1 So, once again, the standard speaks of the
2 basis set. The intent of the standard is to create
3 requirements free that such that if a new service
4 conforms with this requirement, it will not, most of
5 the time, accept or create unacceptable interference
6 into the basis system.

7 That basis system includes all sorts of
8 services having nothing to do with DSL or any of the
9 spectrum management classes being created by the
10 standard. It's voice, voice band data. If you give
11 me the standards, it's a whole list of existing
12 services that use copper wire that preexisted DSL,
13 preexisted spectrum management classes, and it's
14 those services that the spectrum management standard
15 intended to protect.

16 Now, along the way, as I said, if a spectrum
17 management class is created, if the requirements are
18 defined such that a service conforming to these
19 requirements do not interfere with the basis set,
20 it's possible -- not mandatory, it's possible that
21 the spectrum -- the requirements of that spectrum
22 management class will itself become a member of the
23 basis set. So that if a new service is considered,
24 and a new spectrum management class is going to be
25 created to cover that new service, only then will

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1 the introduction of service corresponding to that
2 new class be such that the likelihood of interfering
3 with the earlier spectrum management class be --
4 would -- only then would it be such that there would
5 be a low likelihood of interference with that
6 earlier class.

7 There was no intent to ensure spectrum
8 compatibility among these classes. The intent is to
9 protect the basis set. It's only if a class moves
10 into the basis set that it would then also become
11 protected.

12 Q Okay. So what you're saying, and just
13 to clarify what you're saying, there are classes in
14 the issued standard as defined, and what you're
15 saying is they are not understood to be spectrally
16 compatible, the Class I and Class II, Class III?

17 A Depends. Depends on what point in time.

18 If Class I -- let's say there was Class I.
19 If Class I becomes part of the basis, then Class II
20 and III would not unacceptably interfere with Class
21 I. If Class I did not become part of the basis, it
22 may or may not suffer interference with Class II and
23 III, because it would not be one of the basis set of
24 services for which the calculations would have been
25 performed to see if the new class unacceptably

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1 interfered or not.

2 That's how it works.

3 Q Okay. I think there may be a
4 disagreement with this -- this statement from
5 Dr. Burd, but do you understand his statement
6 here -- do you understand his description of what --
7 his description of this requirement for the phrase
8 "spectrum management class"?

9 A I'm not sure I understand your question. Ask
10 that again.

11 Q Do you understand what he means by that
12 first sentence on the top of page 18?

13 Regardless of whether you disagree with
14 it, do you understand it?

15 A I'm not sure I do. I'm not sure I do. I
16 would have to do some guessing as to what he was
17 trying to mean here.

18 By the way, there was a number of things that
19 I don't think are, you know, crystal clear in his
20 second point. And if I read elsewhere, in this
21 first one.

22 Q What if we just took off the word,
23 "described in the patents in suit," do you
24 understand what Dr. Burd is saying, that spectrum
25 management classes are understood to be spectrally

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1 compatible with one another?

2 A Well, that's what I just said, I actually
3 disagree with that statement, and I told you why.

4 Q So putting aside whether you agree or
5 disagree, do you understand what he's asserting?

6 A So now you want me to read just "a patent in
7 suit" out of the sentence?

8 Q Yeah, take that out of the sentence --

9 A Okay.

10 Q -- and regardless of whether you agree
11 or disagree with that sentence, do you understand
12 what he's saying?

13 A Well, let me take out a few things.

14 Q Okay.

15 A Let me take out the words "described in the
16 patents in suit --"

17 Q Sure.

18 A -- let me take all of that out.

19 Q Sure.

20 A So let's be sure that I understand -- let me
21 read back what I think you're asking.

22 You're asking me to look at his -- look at
23 the statement: "First, it is useful to understand
24 the spectrum management classes are understood to
25 be" -- let me make another modification. Let me

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1 take out the word "the."

2 "First, it is useful to understand that
3 spectrum management class are understood to be
4 spectrally compatible to one another."

5 Q Yes.

6 A You're asking me do I understand that
7 statement?

8 Q Correct.

9 A Independent of whether I agree with it?

10 Q Correct.

11 A I would understand that statement, yes. That
12 I think I would understand.

13 Q Okay. So I'm going to spend some time
14 today to sort of go over some of the prior art
15 references, and I want to -- basically, I want to
16 evaluate these prior art references in light of
17 these two points that Dr. Burd is making.

18 So I want you to keep this
19 understanding of this first point in mind as we go
20 through this exercise. That's all I'm saying.
21 Regardless of whether you agree with Dr. Burd is
22 saying here, I want you to --

23 A Well, we'll have to take that question by
24 question, because I'm not -- you'll have to give me
25 a question, because I don't understand the

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1 instruction you just gave me.

2 Q Okay. Okay. Okay. I'm just giving
3 you a preview of where I'm going.

4 A Okay.

5 Q And then, if we look at number 2, the
6 second point, he says, "It is useful to understand
7 that spectrum management classes, quote-unquote,
8 involve a collection of requirements which are
9 defined and fixed as a group."

10 Do you understand that?

11 A No, I don't.

12 As a group -- I'm actually struggling -- I'm
13 actually not sure what he's saying here.

14 Q Okay.

15 A "Second, it's useful to understand the
16 spectrum management classes involve a collection of
17 requirements."

18 If I stop there, I have an understanding of
19 what he's saying.

20 "Which are defined" -- let's say -- "which
21 are defined as a group."

22 I'm not sure I understand that.

23 And defined and fixed as a group.

24 If it read, It's useful to understand that
25 spectrum management classes involve a collection of

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1 requirements, which are fixed, I think I would
2 understand that. Which are defined and fixed, I
3 would understand that.

4 As a group? I'm not sure -- I'm not sure I
5 understand that.

6 If he means there are sets of requirements,
7 one set associated with one spectrum management
8 class, and that there are, in fact, several such
9 sets of requirements, if that's the group, then I
10 would have some -- I might have an understanding of
11 what he's saying here.

12 Q Yeah. I think that's -- that's pretty
13 close.

14 I think what he's attempting to
15 describe is the regime that's been issued T1.417
16 standard.

17 Does that help you understand the
18 sentence?

19 A Well, are you saying that's what he meant
20 here, the issued standard?

21 Q Correct, yes.

22 A Okay. So let me make sure I understand what
23 you're asking me.

24 Let's make the assumption that he actually
25 included the words so that this sentence read as

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1 follows: "Second, it is useful to understand that
2 the spectrum management classes defined by the
3 issued standards involve a collection of
4 requirements which are defined and fixed as a
5 group."

6 I would understand that.

7 Q Okay. Great.

8 A With a lot of -- I would understand that
9 assuming that he actually meant what I -- what I
10 understand this to mean based upon our earlier
11 discussion, which remember, I -- I characterized
12 this here using a lot more words than he did.

13 One spectrum management -- there's a set of
14 requirements, so a set of requirements, associated
15 with one member -- associated with one spectrum
16 management class.

17 If I have several spectrum management
18 classes, there would be several sets of
19 requirements. If those sets of requirements is what
20 he is referring to as "group," that I understand.

21 But that's not exactly what he says here.

22 Q So what you're saying is the word
23 "group" is referring to a group of classes, or the
24 group of requirements?

25 A Group of requirements.

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1 Q Oh, Okay. I think we're in agreement.

2 So I think we -- I just want to keep
3 these two points in mind as I'm going over --

4 A Well, I'm trying to, but these are not
5 crystal clear, as I said earlier.

6 Q Okay. Got it. Understood.

7 Okay. Let's see.

8 So if we can turn back to your report.

9 And, by the way, on the second point,
10 fixed as a group, you -- do you agree with that
11 characterization of spectrum management classes?

12 A Well, are we now looking at the issued
13 standard or any of the subsequent standards?

14 Q Let's take the issued standard. Do you
15 agree that's true for the issued standards?

16 A Just the first issued standard?

17 Q The first issued standard.

18 A Well, with -- with my understanding of what
19 "group" means is a set of requirements associated
20 with a spectrum management class. There are several
21 such classes, therefore, there are several such sets
22 of requirements. The sets of requirements comprise
23 the group that I'm understanding.

24 Q Okay. Thank you.

25 All right. If we can turn to page 40

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1 of your report.

2 This page is your prior art analysis in
3 your report.

4 A Give me just a moment, I want to just put
5 myself in the right position in this report.

6 Q Okay.

7 So this is the start of your prior art
8 analysis of your invalidity report, this page,
9 correct?

10 A It is.

11 Q And if you flip over one, the first
12 reference you looked at is the Palm reference. Is
13 that right?

14 A Yes.

15 Q Okay. And if we look at page 42 to 43,
16 there is a discussion of the limitation modes that
17 are compatible with one or more spectrum management
18 classes defined by a standard...

19 A Yes.

20 Q And starting at page 43, line seven, it
21 begins to say, "Person of ordinary skill in the art
22 would understand that the disclosure in Palm of the
23 various XDSL standards necessarily discloses the
24 content of those standards, each of which defines
25 power spectral density requirements."

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1 So it's not clear to me what you're
2 saying there. Are you saying that the XDSL
3 standards themselves disclose the spectrum
4 management classes?

5 MR. REED: Object to the form.

6 A That's the not what it says.

7 Q So in your opinion --

8 A Whoa, whoa, let me take a step back.

9 Q Sure.

10 A Under whose construction spectrum management
11 class?

12 Q Okay. I understand AT & T believes
13 this term was indefinite. So I assume all of your
14 analysis is done under Brandywine's construction --
15 or your construction of Brandywine's construction.
16 Is that correct?

17 A Well, I have to look at that to be sure
18 because, like I said, I didn't accepts AT & T's
19 construction.

20 I did attempt to do my analysis under both
21 sets of constructions. But I'd have to look at that
22 in particular. But certainly under Brandywine's
23 construction.

24 Q Sure.

25 So the first question is, understand

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1 your analysis of Palm, what meets the spectrum
2 management class limitation in Palm?

3 A Can I have a copy of Palm?

4 Q Okay. Sure.

5 MR. REED: So what are we up to.
6 Marking as Exhibit 5 a patent to Palm, which is
7 discussed --

8 THE WITNESS: And do you have -- I have
9 it in my report, but to save me the time of flipping
10 back and forth and still keeping this in order, does
11 anyone have a copy of the proposed claim
12 constructions from both sides?

13 MR. REED: Do you have an extra copy of
14 his report?

15 If we could just tear a couple pages
16 out of here.

17 THE WITNESS: Yeah, it's all in my
18 report, I just --

19 MR. SUN: Could I tear that Exhibit 5?
20 (Exhibit received and marked EXHIBIT 5 for
21 identification.)

22 MR. SUN: Here is a set of --

23 THE WITNESS: You had a stapled copy?

24 MR. SUN: There are multiple staples.

25 THE WITNESS: I would have preferred to

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1 take this one apart because --

2 MR. SUN: That's okay.

3 THE WITNESS: Was there a question?

4 BY MR. SUN:

5 Q I believe my question was what a Palm
6 discloses spectrum management classes?

7 A Okay. So, yeah, and I asked for the proposed
8 constructions.

9 So Brandywine's proposed construction for
10 spectrum management classes is requirements for data
11 transmission commitment designed to minimize the
12 interference with other nearby data transmission
13 equipment.

14 Now, every DSL standard includes power and
15 power spectral density requirements, the intent of
16 which -- at least one intent of which is to minimize
17 interference with other nearby data transmission
18 equipment.

19 So under Brandywine's construction, DSL --
20 every DSL standard would include -- would be a
21 spectrum management class, and Palm discloses
22 several DSL standards. Each of those would have its
23 respective power spectral density requirements
24 issued here, but the problem actually goes beyond
25 that and actually mentions -- I actually have this

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1 footnoted. It's footnote 43 in my report, and let
2 me read from -- from Palm itself.

3 Okay. Now, I'm looking at column 4, line 42
4 of Palm. "According to an object of the present
5 invention, the method for selecting a communication
6 standard from among a plurality of communication
7 standards and comprises auditing condition of
8 communication channel and selecting the
9 communication standard based upon the audited
10 condition of communication channel and a capability
11 of each of the plurality communication standards."

12 Now, it's quite clear that what Palm is doing
13 in this disclosure is the following, and I'll
14 simplify this: Palm involves measuring -- making
15 measurements of a line and choosing one of a set of
16 alternatives for communicating. It can choose ADSL
17 or VDSL or CDSL. There's a finite set of possible
18 choices. The line is measured. Based upon the line
19 measurements, one of these is chosen.

20 Now, that's one example. But this language
21 that I just read would say that, as an example, if
22 there had been a second standard including spectrum
23 management classes, such as the proposed standard
24 that existed on the date of the patent, that
25 proposed standard also has included within it

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1 standardized -- a standardized list of alternatives,
2 one of which would be chosen based upon a line
3 measurement.

4 So Palm is disclosing the spectrum management
5 classes certainly under Brandywine's construction
6 and it would be disclosing spectrum management
7 classes that actually existed within the draft
8 standard.

9 Now, they never emerged as final standards,
10 but if one took those at the time of the patent,
11 given that's all that existed, if one took those as
12 the classes in the draft standard, they're in Palm.

13 That's a standard. Palm's invention pertains
14 to any standard --

15 Q Okay.

16 A -- he said that himself.

17 Q Okay. So I think I heard two points.
18 The first is, in your view, the XDSL standards
19 themselves are the classes, at least under
20 Brandywine's construction. Is that correct?

21 A That's one possibility.

22 Q Okay. And the second possibility is
23 this passage here in Palm 442, is read to, in your
24 view, incorporates any existing standard including
25 the draft spectrum management standard at the time?

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1 A Well, one is skilled in the art at the time
2 of the filing of the '501 patent would have had
3 access to Palm, would have had access to the draft
4 standard, and would have said, well, in Palm, I
5 could mix and match. I could choose from among
6 existing DSL standards. That would be my set of --
7 the second set could be the spectrum management
8 classes as they existed in the draft standard, which
9 were known for some of the DSL, some of the -- some
10 from the draft standard, the collection of both, all
11 of these would have been possibilities.

12 Q Okay. I just want to get that
13 straight.

14 MR. REED: Counsel, we've going for
15 about an hour, is now a good time for a break?

16 MR. SUN: Could we do -- yeah, let's
17 take a break.

18 So ten minutes?

19 (Recess taken at 10:56 a.m.)

20 (Back on the record at 11:20 a.m.)

21 BY MR. SUN:

22 Q Welcome back, Doctor Acampora.

23 A Okay.

24 Q So I think before the break we were
25 talking about Palm --

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1 A Yeah.

2 Q -- and we were on page 43 of your
3 report there, and I believe you stated that the XDSL
4 standards themselves disclosed the spectrum
5 management classes for Palm?

6 A Yeah, under Brandywine's construction, I
7 believe that's the case.

8 You know, it's really quite clear in Palm. I
9 gave you one example in column 4. There's a second
10 example I can give, if you give me a moment, in
11 column 2, where Palm speaks of -- and this is
12 column 2 beginning at line 59, "A communication
13 control session executes a handshake procedure
14 (protocol) in negotiation channel to obtain
15 information containing high-speed data
16 communications, including type identification
17 information of XDSL used in communication exchange.
18 A communication standard refers to any standard,
19 whether de facto, proprietary or issued by an
20 industry or government body."

21 So, once again, the Palm technique consists
22 of measure a channel, choose an appropriate scheme
23 based upon those measurements. That appropriate
24 scheme would conform with the standard. It could be
25 any of the XDSL standards. It could be any

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1 communication standard, any type of standard. It
2 could be de facto, proprietary or issued by an
3 industry or government body, including what existed
4 at the time of the filing of the '501 patent, the
5 draft spectrum management class standard. Each of
6 those, defined in that standard, were a set of
7 schemes, the intent being measure the channel, pick
8 a scheme.

9 It's all right there.

10 Q Okay. So at least what an XDSL
11 standards -- are the XDSL standards themselves
12 spectrally compatible amongst each other?

13 A Well, I'm not sure what you mean by that,
14 "spectrally compatible amongst each other."

15 They certainly -- the masks certainly
16 recognize that other -- recognize the possibility of
17 cross talk and interfering with other services using
18 the copper wire in the same bundle.

19 Q But for standards such as CDSL, ADSL,
20 VDSL, are they guaranteed to not generate excessive
21 cross talk when they're in the same binder?

22 MR. REED: Objection to form.

23 A There are no guarantees at all, even if we
24 look at the current day spectrum management class
25 standards, that are no guarantees.

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1 Q Is there some definition of spectral
2 compatibility across all of these DSL standards?

3 MR. REED: Same objection.

4 A I guess I don't understand the question.

5 Q Is there some document defining
6 acceptable levels of cross talk across these various
7 DSL standards?

8 A I'm not sure if there is any, nor is there
9 any necessarily, as I explained earlier, in the
10 spectrum management class standard as it exists
11 today, unless an earlier DSL made its way into the
12 basis set.

13 The intent was to ensure compatibility with
14 the basis set of any new type of service that might
15 be offered. And unless that new service itself
16 happened to be a DSL-type service and found its way
17 into the basis, no guarantee -- and I'm using the
18 word "guarantee" in a very, very loose sense. As I
19 said earlier, there are no guarantees. The intent
20 is to make it unlikely. Unlikely, I think the
21 objective is 1 percent likelihood that there would
22 be unacceptable interference from a new service into
23 a basis -- into any of the basis services.

24 And, you know, one thing the DSL does,
25 clearly, all DSL, it respects voice.

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1 Q So just focusing on the DSL varieties
2 of services, is there some notion of spectral
3 compatibility -- spectral compatibility across each
4 of these services?

5 MR. REED: Object as to form.

6 A I don't know what you mean by "some notion
7 of."

8 As I said, these standards -- the masks all
9 recognize the possibility of cross talk. But, by
10 the way, I don't see that Brandywine's proposed
11 construction is limited to DSL data transmission
12 equipment. Seems there's other nearby data
13 transmission equipment.

14 And for sure, the DSL standards all recognize
15 the possibility of interfering with voice band data
16 equipment, and what's done is real simple, they
17 don't transmit in the same frequency band.

18 So, yeah, that -- it's there, the standards
19 include -- Brandywine proposed constructions would
20 include the preexisting DSL standards.

21 Q So just setting aside your
22 understanding of Brandywine's construction for the
23 moment, going back to what Nick Burd had in his
24 report, that the various classes are spectrally
25 compatible -- are considered spectrally compatible,

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1 just taking that statement on its face, are the
2 various XDSL standards spectrally compatible?

3 MR. REED: Object as to form.

4 A You're asking are they?

5 Q Yes.

6 A I don't know what you mean by "spectrally
7 compatible."

8 Can they coexist in the same binder?

9 Q Sure.

10 A Do they coexist in the same binder?

11 Absolutely.

12 Q Is there a standard defining acceptable
13 level of cross talk across all of the different DSL
14 types?

15 A Can I see the existing -- or any version --
16 any issued spectrum management class standard?

17 Q No, I don't have it.

18 A Then I can't answer your question.

19 Q So that's not something you considered
20 when you pointed to spectrum management -- or the
21 DSL services at spectrum management classes in Palm.

22 A I applied Brandywine's proposed construction
23 for spectrum management classes, and I already gave
24 my opinion on that, the DSL standards would comply
25 with that construction.

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1 Q But you didn't consider the requirement
2 that the DSL standards have to be spectrally
3 compatible with each other?

4 A I didn't say that.

5 I already told you, I think that there is a
6 notion in all those standards that there is a
7 recognition built into all of those standards of the
8 possibility of cross talk.

9 Q So then what does it mean for multiple
10 DSL services to be spectrally compatible, in your
11 opinion?

12 A They can coexist in the same binder.

13 Q Okay. With that understanding, do you
14 think that varies DSL services are spectrally
15 compatible?

16 A Yes.

17 Q Can two DSL services ever generate
18 excessive cross talk?

19 A What do you mean by that?

20 Q So in the same binder, can two DSL
21 services be deployed in a way that generates
22 excessive cross talk?

23 A I don't know what you mean by "excessive
24 cross talk."

25 Q Is there -- so there is no document

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1 describing what is acceptable level of cross talk
2 across the DSL services. Is that correct?

3 A I need to see the spectrum management class
4 standard -- any spectrum management class standard
5 to answer that question, but I believe the answer to
6 the question is there is.

7 Q Putting aside this issue of spectrum
8 management class standard, for the XDSL standards
9 themselves per se, is there some definition of there
10 being XDSL standards that devise an acceptable level
11 of cross talk.

12 A Can I see an XDSL standard.

13 Q To your knowledge, is there anything
14 like that?

15 A I don't recall. I actually -- what I do know
16 is that all these masks took into account possible
17 excessive cross talk as well, as well as there's a
18 phrase that's actually used in these documents, I
19 think it's "foreign cross talk." There's self cross
20 talk and there's foreign cross talk.

21 Q Okay. Is it fair to say you didn't
22 consider Nick Burd's requirement that the classes be
23 equally spectrally compatible when you analyzed the
24 Palm reference?

25 MR. REED: Object as to form.

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1 A Yeah, that's -- I actually -- well, first, I
2 didn't have his report available. So did I take
3 into account exactly what he said?

4 Well, I already told you I don't even agree
5 with what he said, I don't even necessarily
6 understand what he said, except by providing my
7 interpretation of what he might mean, you guided me
8 through a whole bunch of questions earlier, and we
9 came to a conclusion if that's what he meant, well,
10 in that very limited sense I could agree with that,
11 but that did I consider spectral compatibility?

12 I did in applying -- in performing my
13 analysis. What I applied was Brandywine's proposed
14 construction.

15 Brandywine's proposed construction says
16 nothing about the other data transmission equipment
17 being DSL. I even considered that, but for sure --
18 and I gave you an example just a few minutes ago --
19 all DSL standards respect and are designed to
20 minimize interference with voice band data for sure.

21 So it's completely consistent with
22 Brandywine's construction.

23 Q But across the various DSL services
24 themselves, is there assurance of spectral
25 compatibility?

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1 A Brandywine's construction does not require
2 that. Let me just point that out to begin with.

3 So you're asking if we further limit
4 Brandywine's proposed construction, and even further
5 than it is, so that nearby data transmission
6 equipment reads nearby DSL data transmission
7 equipment.

8 Q I'm not asking about the -- your
9 understanding of Brandywine's construction, but just
10 for the XDSL standards themselves, which you point
11 to as being classes, are they spectrally compatible
12 with each of these?

13 A Well, they're classes as -- if I applied
14 Brandywine's construction, they're classes. I mean,
15 I told you why. I also told you that it's not just
16 those, but even the draft spectrum management
17 classes would fall under Palm, because it was the
18 clear language in Palm where he's referring to
19 any -- any standard, de facto, proprietary, issued,
20 and so forth.

21 So I guess I'm still not sure what you're
22 asking. You're asking to take a -- I think you're
23 asking to take a very narrow subset, let's ignore
24 everything and play a game, the game being, let's
25 consider only DSL standards, the existing DSL

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1 standards, is there a notion of spectral
2 compatibility built into those standards?

3 In my opinion, the answer is yes.

4 Q So is that the same notion of spectral
5 compatibility that's described -- so -- strike that.

6 So the issued standard, T1.417, there
7 is a definition of spectral compatibility, because
8 the classes are understood to spectrally compatible
9 if the surface falls within the requirements of
10 those classes, correct?

11 A I believe that is not true.

12 Q Okay.

13 A There was a notion of spectral compatibility
14 basis set. Each class is spectrally compatible with
15 every member of the basis set. That's true.

16 Q Okay.

17 A And if a DSL happens to be one of the basis
18 sets, then a different spectrum management class
19 would be spectrally compatible with it as well.

20 Q So -- okay. If we can go to page 62.

21 A Of?

22 Q Of your report.

23 It begins your analysis of McHale and
24 the '501 patent there?

25 A Yes.

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1 Q If you look on page 65.

2 Just the last paragraph on page 65,
3 just take a moment to read that.

4 A Just want to put it into some context, if I
5 can read that as well.

6 Okay.

7 Q Okay. So on McHale, on page 65, you're
8 beginning your analysis again with spectrum
9 management classes.

10 What are you pointing to as spectrum
11 management classes in McHale?

12 A Multiple DSL standards.

13 Q Okay. And that's for the same reason
14 as we talked about with Palm, correct?

15 A That's correct.

16 Q Anything else you're pointing to as
17 spectrum management classes in McHale?

18 A Can I see McHale?

19 Q Okay.

20 MR. SUN: Marking as Exhibit 6, a copy
21 of the McHale reference.

22 (Exhibit received and marked EXHIBIT 6 for
23 identification.)

24 THE WITNESS: Thank you.

25 Yes.

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1 BY MR. SUN:

2 Q Okay. Can you point me to what else
3 you're pointing to as spectrum management classes in
4 McHale?

5 A "Ethernet, fast ethernet, V.35, data
6 protocol, frame relay, asynchronous transfer mode
7 (ATM), switched multi-megabit data services (SMDS),
8 high level data link control (HDLC), serial line
9 internet protocol (SLIP), point-to-point protocol
10 (PPP), transmission control protocol/internet
11 protocol (TCP/IP), or any other appropriate
12 protocol, collectively referred to as a digital
13 protocol."

14 There may be more.

15 Q So that was from column 3 of line 45,
16 those words?

17 A Yeah. It's basically footnote 88 to my
18 report.

19 I think that may be it but I can give more if
20 you'd like.

21 Q Oh, no, that's fine.

22 A Okay.

23 Q So the list you just mentioned, in your
24 opinion, all of these data communication protocols
25 are considered spectrum management classes?

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1 A Under Brandywine's construction, they were
2 all requirements for data transmission equipment
3 designed to minimize interference with other nearby
4 data transmission equipment, yes.

5 Q Are they all mutually spectrally
6 compatible?

7 A What do you mean by "mutually spectrally
8 compatible"?

9 Q That there's some standard defining
10 what the level of cross talk -- defining what would
11 be an excessive level of cross talk between these
12 protocols?

13 A I'm not sure I understand the question.

14 Is there a standard? These are all -- each
15 of these is defined by its own standard.

16 Q Is there a separate document or within
17 these standards that defines the acceptable level of
18 cross talk between two or multiple of these
19 protocols?

20 MR. REED: Object as to form.

21 A Can I see what -- well, you already told me
22 that you don't have a copy of any of these.

23 Q Correct. But just to your knowledge.

24 A You're asking does any one of these standards
25 by itself include a definition of excessive cross

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1 talk?

2 Q Correct.

3 Strike that.

4 MR. REED: I'm sorry.

5 MR. SUN: He's about to answer.

6 A And you're asking to another -- cross talk to

7 what?

8 Q To -- from one -- between two

9 protocols, is there a document quantitatively defining

10 an acceptable level of cross talk between two or

11 more of these protocols?

12 A Define "acceptable level of foreign cross

13 talk." That is what you're asking.

14 Q Just specifically across different

15 communication protocols.

16 MR. REED: Object as to form.

17 A I'm not sure I could answer that question,

18 because it might even be application dependent.

19 So, many of these schemes are adaptive

20 schemes where the modulation will be adaptively

21 updated in such a way as to protect the application

22 being supported, and in so doing, avoid interfering

23 with an adjacent service that it itself avoided by

24 choosing the particular modulation scheme used.

25 Q So what you're saying is there's some

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1 attempt to address cross talk with other protocols.

2 And my question is: Is there a
3 quantitative definition of what deployment -- what
4 deployment requirements may be understood to not
5 generate an excessive amount of cross talk?

6 A Okay.

7 MR. REED: Object as to form.

8 A At what point in time?

9 Q Any point in time.

10 A I'd have to look at the standard.

11 Q But, to your knowledge, there is no
12 such definition within the body of these standards
13 themselves?

14 A Yeah, I'm not sure I'm saying that either,
15 but let me look at the standard. There very well
16 may be.

17 Q Okay.

18 A I mean, there are other things that I'm
19 thinking about, but I'm not sure if -- I don't know
20 for certain that it's that.

21 Q Okay. So, off the top of your head,
22 you don't know if they're there?

23 A I need to look at the standards.

24 Q Okay.

25 A But, by the way, my analysis I don't think is

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1 predicated upon that. My analysis, once again, is
2 predicated on Brandywine's proposed construction.

3 Q Understood. Understood.

4 Okay. You can put McHale aside. And
5 if you'll flip to -- go back to your report.

6 A Give me a second, it's getting a little messy
7 over here.

8 Q Your report, page 86.

9 Here is where your analysis of Brown
10 begins, correct?

11 A Yes.

12 Q Okay. And then if you flip to page 88,
13 and then on to 89, here is where you're discussing
14 how Brown discloses spectrum management classes,
15 correct?

16 A Correct.

17 Q And so what in your opinion in Brown
18 discloses spectrum management classes?

19 A Can I get a copy of Brown?

20 Q Sure.

21 A Thanks.

22 Q Exhibit 7 is a copy of the Brown
23 reference.

24 (Exhibit received and marked EXHIBIT 7 for
25 identification.)

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1 THE WITNESS: By the way, all of the
2 standards -- all of the XDSL standards do include a
3 power spectrum density mask and a power of -- total
4 power of constraint, and for sure these -- these
5 would -- the imposition of both of these constraints
6 would tend to avoid interference.

7 It's not the case that -- it's
8 certainly not the case that if I can't communicate,
9 I could arbitrarily raise my power level as high as
10 I need to to ensure that my communication is
11 successful. It was recognized very early that would
12 destroy communications in adjacent -- in subscriber
13 lines included in the same bundle.

14 So there's always been a recognition of
15 the effect of -- in all of these standards of the
16 potential for interference with someone else.
17 That's always there.

18 BY MR. SUN:

19 Q So we can talk about that after you
20 tell me what discloses spectrum management classes
21 are disclosed in Brown.

22 A In the XDSL standards.

23 Q Okay. Thank you. That's just for the
24 same reasons we discussed before in McHale and Palm,
25 correct?

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1 A At least for those reasons, yes.

2 Q Anything more in Brown that you're
3 pointing to as spectrum management classes?

4 A Yeah. If we look at Brown, column 2,
5 lines 42 through 48, "Designing a DSL driver to
6 account for the worst-case scenario, only -- not
7 only wastes power on short lines, but can also
8 introduce excessive near-end cross talk (NEXT), in
9 adjacent subscriber lines. Because the subscriber
10 lines generally tend to be concentrated in the
11 central switching office, any driver dissipating
12 excess power can cause additional unwanted
13 interference in the nearby subscriber lines."

14 Let me go on just a little bit further, "The
15 present invention is directed to overcoming or at
16 least reducing the effects of one or more of the
17 problems set forth above."

18 In our context, one of those problems set
19 forth above is cross talk.

20 Q So what in that passage is the class,
21 or spectrum management class?

22 A Well, applying Brandywine's claim
23 construction, any of the XDSL standards further
24 limited by Brown to drop the power level below the
25 maximum allowed when possible.

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1 Q Is there anything else in Brown that
2 refers to spectrum management classes?

3 A Not that I can see.

4 Q Okay. If we could go to the next one,
5 which is page 105.

6 So this is the etherloop modem,
7 correct?

8 A Correct.

9 Q So I guess, first of all, I note that
10 all the footnotes in this section refers to the '501
11 patent.

12 A Correct.

13 Q Are you relying on just that
14 description of the etherloop modem in the '501
15 patent for analysis?

16 A That's correct.

17 Q Have you viewed any other documents for
18 the etherloop modem?

19 A No.

20 Q So the etherloop modem -- that
21 description of the etherloop modem was obviously
22 made known to the examiner when the patent was being
23 examined.

24 Do you have any opinion as to why the
25 examiner was able to allow the claims over that

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1 description of the etherloop modem?

2 MR. REED: Object as to form.

3 A Yeah, I'm not sure I understand the question.

4 Q Do you have any opinion as to why the
5 claims were allowable, at least in the examiner's
6 opinion, or not?

7 A I would need to look at the prosecution
8 history to even attempt to assess what was in the
9 examiner's mind.

10 Q Did you consider this --

11 A I do know that --

12 Q Go ahead.

13 A -- I do know that, in my opinion, the
14 etherloop modem, if we apply Brandywine's
15 construction for -- Brandywine's proposed
16 construction for all of the claims in dispute, and
17 in some cases AT & T's construction -- proposed
18 construction would completely invalidate the patent.

19 Q But there's no opinion as to why the
20 examiner may have been wrong or -- in his or her
21 examination of the etherloop prior art?

22 A I would need to look at the prosecution
23 history.

24 Q But that opinion is not in the report?

25 A I don't know.

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1 I don't appear to have relied on the
2 prosecution history in forming my opinion in this
3 case. I certainly was aware of it. I read it. And
4 I -- based upon what I read there, based upon a
5 reading of the patent in this case, I just used the
6 description of the etherloop modem taken from the
7 '501 patent itself and formed my opinions.

8 Q Okay. Thank you.

9 A And, of course, applying both sides' proposed
10 claim constructions.

11 Q Okay. So if you look at page 106 to
12 107 of your report.

13 A I'm there.

14 Q There is a discussion on the etherloop
15 modem discloses spectrum management classes without
16 limitation?

17 A Correct.

18 Q Maybe you can just tell me what in the
19 etherloop modem discloses spectrum management
20 classes?

21 A Well, this is a preliminary -- looking in my
22 report at page 106, line 20 --

23 Q Okay.

24 A -- I note that the applicants state that
25 "When an etherloop modem is operating properly, it

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1 will, under many circumstances, select modes of
2 operation that are not in compliance with the
3 aforementioned spectrum management classes."

4 And then I go on to state, "This statement by
5 the applicants, however, shows that the etherloop
6 modem can, in some circumstances, operate in modems
7 that do comply with ANSI spectrum management
8 standard."

9 Q Okay.

10 A And this means -- a point of clarification:
11 That is the draft standard referenced in the '501
12 patent.

13 Q Okay. Understood.

14 A Now, that was just -- I wanted to -- I want
15 to fully answer your question. That's part A.

16 Q Sure.

17 A Okay. So how the etherloop modem operates is
18 by measuring interference on its line across the
19 band and then choosing a spectral range where there
20 was little interference.

21 By so doing, since the interference is
22 reciprocal, it would help to ensure that it was
23 "minimally" -- and I put that in quotes because it's
24 not a mathematical minimization, it's really more of
25 an avoidance. So that will avoid the etherloop

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1 modem interfering with any other services using
2 adjacent subscriber lines.

3 And as I point out, the only thing that's
4 left there is whether these are defined by the
5 standard. And there I think it would have been
6 obvious to modify what's done in the modem to comply
7 with the standard.

8 Q So, in your opinion, it was these
9 ranges that are selected that are the classes?

10 MR. REED: Object as to form.

11 A That's correct.

12 Q Are these ranges -- do you remember we
13 discussed earlier that the spectrum management
14 class, according to Dr. Burd, had to be a group of
15 requirements that are fixed and defined together?

16 A Well, I remember we spoke about a lot of the
17 confusing aspects of what Dr. Burd wrote in his
18 report, so you're going to need to clarify what --
19 you're going to have to properly constrain your
20 question by exercising the confusing parts of what
21 Dr. Burd said.

22 Q I just want to recall your memory to
23 that discussion.

24 And do you think these ranges that are
25 selected by etherloop modem, do they meet that

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1 requirement, that these classes -- quote-unquote
2 classes meet that requirement from Dr. Burd's
3 report?

4 A Okay. Meet what -- I have the report in
5 front of me.

6 Q I think it was on page 18 of Dr. Burd's
7 report, the second point, you said, "It is useful to
8 understand that 'spectrum management classes'
9 involve a collection of requirements, which are
10 defined fixed as a group."

11 Do you see that?

12 A Yes.

13 Q So did these ranges that are chosen in
14 the etherloop modem, do they involve a collection of
15 requirements that are defined and fixed as a group?

16 A They could.

17 Q How so?

18 A It may very well be the case that there is a
19 set of let's say DSL services run in the same
20 binder, and the -- some of which were operational at
21 one point in time, some of which were operational at
22 a different point in time.

23 At any point in time this etherloop modem is
24 going to choose its operating spectrum in such a way
25 as to neither interfere with -- but it -- so as to

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1 not be interfered with by whatever other services
2 might be sharing the same bundle, and in so doing,
3 avoid interfering with that other service. If the
4 two servers are using different bands, they're not
5 going to interfere.

6 So depending upon -- and this would be
7 installation dependent -- which DSL services are
8 operational -- are operating at the time and not,
9 that will basically fix the set of spectra over
10 which the ethernet modem -- etherloop modem would
11 eventually settle. That's a group.

12 Q So when you say, "group," you're
13 talking about a group of bands, correct?

14 A Well, I'm trying to use it as, I think,
15 Dr. Burd is using it here. We had a discussion of
16 this a while back --

17 Q Uh-huh.

18 A -- so it would be this -- one class would
19 have a set of requirements, several classes would
20 have several sets of requirements. Those sets,
21 plural, of requirements would be the group. In that
22 case, these ranges would be the group.

23 And the power levels and the power spectrum
24 density over that range, that would be the group --
25 the set of those would comprise the group.

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1 Q Does the etherloop modem also
2 address -- to your knowledge, does it also address
3 the power level across the ranges?

4 A Well, I don't know if it explicitly describes
5 that. I don't think that the '501 patent mentioned
6 that, and as I already testified, I didn't review
7 the -- anything outside of what was actually
8 disclosed in the '501 with regard to etherloop.

9 But if it's not explicitly there, it would be
10 overtly obvious that you would want to limit the
11 powers being sent both to avoid wasting power, and
12 also to avoid interfering. If you don't need to
13 send as much power as you're currently sending to
14 communicate satisfactorily, drop the power level.
15 That's almost universally done.

16 Q And, to your knowledge, the only thing
17 etherloop modem is adjusting is the frequency
18 ranges?

19 A Well, the only thing that I'm certain it's
20 adjusting is the range of frequencies over which it
21 would operate.

22 But it would be obvious, with the reason I
23 said, to adjust the power, and also, the power
24 spectral density as well.

25 And when we say, "adjust the range of

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1 frequencies," implied in that is the spectral mass
2 associated with that.

3 Q I'm going to turn to page 125.

4 Here is your analysis of Palm in
5 combination with the Greszczuk -- I'm not sure if
6 I'm pronouncing that correctly.

7 MR. REED: G-R-E-S-Z-C-Z-U-K.

8 Q Greszczuk.

9 Do you know this individual?

10 A I do not.

11 Q So I notice you have some combination
12 references where you've just seen one page or two,
13 you try to combine two references.

14 I guess let's just focus on Greszczuk.

15 What limitation is Greszczuk adding to
16 Palm or in this page?

17 A Could I have a copy of Greszczuk?

18 Q Sure.

19 MR. SUN: This is Exhibit No. 8, a copy
20 of the Greszczuk reference.

21 (Exhibit received and marked EXHIBIT 8 for
22 identification.)

23 A Okay. So I think -- can I have the question
24 read back one more time? Maybe I can answer without
25 reading any further.

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1 (Stenographer reads back as requested.)

2 A Okay. So, I think that Palm stands on its
3 own. I have a section in my report dealing with
4 Palm. I applied both sides of claim construction,
5 and I told you -- and I described in my report why I
6 believe -- that where I think these claim
7 limitations are met.

8 Now, AT & T's construction for duality
9 transceivers includes two or more hardware
10 transceivers available for connection, one at a
11 time, to the subscriber line.

12 I believe that that's disclosed in Palm. But
13 be that as it may, Greszczuk clearly discloses
14 multiple hardware transceivers. And it would be
15 obvious to combine Greszczuk with Palm.

16 Q So Greszczuk is being combined for the
17 purposes -- for the purpose of meeting the plurality
18 of transceivers limitation under Brandywine's
19 construction?

20 A Under AT & T's construction, which I believe
21 Palm disclosed by itself. But if a finder of
22 fact should -- well, if -- yeah, if a finder of fact
23 should find otherwise, I think that would be wrong,
24 but in that case, fill in the plurality transceivers
25 under AT & T's construction with Greszczuk.

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1 Q So Greszczuk meets AT & T's
2 construction of the plurality of transceivers?

3 A That's correct.

4 Q Is it your opinion that Greszczuk also
5 meets the plurality of transceivers limitation under
6 Brandywine's construction?

7 A It would -- Brandywine's construction is
8 broader than AT & T's.

9 Q So both construction of the plurality
10 of transceivers Greszczuk would disclose?

11 A That's correct. Not necessary to combine
12 Greszczuk with Palm, I think Palm meets the
13 plurality of transceivers limitation on its own
14 under either party's proposed construction.

15 But in any event, I use Greszczuk
16 specifically for the following situation: If the
17 Court rules that AT & T's construction is correct,
18 and someone should ultimately conclude that Palm
19 doesn't include a plurality of hardware
20 transceivers, I think that would be a mistake if
21 somebody should draw that conclusion, then fill in
22 the missing element with Greszczuk.

23 And, in passing, I note, since you brought my
24 attention to it, Greszczuk would also meet the
25 plurality of transceivers under Brandywine's

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1 proposed construction because Brandywine's
2 construction does not require one or more hardware
3 transceivers but does involve a separate hardware
4 unit for each transceiver or a separate software
5 running on a single hardware unit, and Greszczuk has
6 a separate hardware unit for each transceiver.

7 Q Okay. Thank you.

8 So for the Greszczuk reference, does it
9 disclose any spectrum management classes, in your
10 opinion?

11 MR. REED: Can I hear back the
12 questions, please.

13 (Stenographer reads back as requested.)

14 A No, I'm not using Greszczuk in combination
15 with Palm to fill in a missing spectrum management
16 class requirement.

17 I think Palm, we already spoke about that,
18 and I believe that's fully disclosed in Palm. But
19 as it turns out, I believe that Greszczuk does as
20 well. It's referring to two different well-known
21 voice band modem standards, V.32 and V.22.

22 And applying Brandywine's construction to
23 spectrum management class, I think that would
24 actually fit under -- would fit the requirements.
25 Those are the requirements, V.32 requirements, V.22

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1 requirements. The data transmission is designed to
2 minimize interference with other nearby data
3 transmission equipment.

4 Other versions of itself, which Brandywine's
5 construction actually allows, it doesn't need to be
6 a different type of equipment, it could be the same
7 type of equipment, a different type of equipment, it
8 could even be voice.

9 Q Okay. Anything else that can be
10 considered spectrum management classes, in your
11 opinion, in Greszczuk?

12 A Well, like I said, I wasn't specifically
13 looking for that. If you'd like, I could read the
14 whole thing and see if there is anything else.

15 Q I'm just talking about what your
16 opinion is that you've set forth in your report.

17 A Well, I already said, in my report, I didn't
18 offer an opinion on whether Greszczuk disclosed
19 spectrum management classes.

20 I used Greszczuk in combination with Palm
21 only for that one specific case that we already
22 discussed. But since you asked me about it here
23 today, I can now tell you that I had read an opinion
24 that Greszczuk does disclose under Brandywine's
25 construction spectrum management classes for the

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1 reasons I gave.

2 Now, you're asking are there any other
3 reasons, and I'd have to look -- I'd have to read
4 Greszczuk to see if they have some other reasons as
5 well.

6 Q Why don't you go ahead and let me know
7 if there's any other things you can point to as
8 spectrum management classes.

9 A Sure.

10 Q So, Dr. Acampora, have you found any
11 other disclosures of spectrum management classes is
12 the question.

13 A Not yet, but I haven't finished reading it.

14 Q Oh, Okay.

15 A I just paused while you were having your
16 discussion.

17 Well, not that I can see here, above and
18 beyond what I already mentioned, but to be
19 completely thorough, I would need to look at the
20 V.32 and V.22 modem standards.

21 Q Okay. Understood.

22 Okay. So just one last question and
23 then we'll take a break.

24 So there's, on page 126 of your report,
25 there's a picture. It's comparing a diagram in Palm

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1 with the diagram in Greszczuk.

2 A Yes.

3 Q Are you -- are you -- is this picture
4 an attempt to combine two references?

5 A Correct.

6 Q And I see you point to, on the bottom
7 figure, which is Greszczuk, you point to 12, 14, 20
8 and 24 as transceivers?

9 A Well, to be specific, 12 and 20 comprise a
10 transceiver and 14 and 22 comprise a different
11 transceiver. So the V.32 transceiver and the V.22
12 transceiver.

13 Q Thank you. So the box itself, 12, is
14 labeled "modulator."

15 A Correct.

16 Q What is a modulator?

17 A Modulator is what -- well, are you asking for
18 everything that's inside of that box or just in
19 general what is modulator?

20 Q In general but consistent with
21 modulator here.

22 A Okay. This box includes -- not limited to,
23 but includes -- equipment that would actually take a
24 digital bit stream on one side and create an analog
25 wave form representative of that digital bid stream

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1 on the other side.

2 Q And the demodulator does the opposite
3 of what you just described?

4 A Well, the demodulator, that -- each of the
5 demodulator boxes includes at least equipment that
6 would accept the analog wave form on one side, and
7 attempt to recreate the underlying digital bit
8 stream corresponding to the bit stream that was used
9 at the far end modulator to create that analog wave
10 form, the channel then distorting the wave form in
11 many, many ways before it actually arrives at the
12 receiver.

13 Q Okay. Can parts of the modulator be
14 implemented in software?

15 A Well, okay --

16 MR. REED: Object as to form.

17 A The following would be true: If we looked at
18 box 12 and box 14, inside those boxes there may very
19 well be some software involved. But that would not
20 be common software. It would be a separate hardware
21 modulator/demodulator in 12 distinct from the
22 separate hardware modulator -- I'm sorry, the
23 separate hardware modulator in 12 separate from the
24 hardware modulator in 14, two separate pieces of
25 hardware.

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1 Now, there may be -- as I understood your
2 question, there may be some software inside of box
3 12, there may be some software inside of box 14, but
4 that's not shared software, and who knows what
5 function that might perform.

6 Q Okay.

7 A All right. And I might make comparable
8 statements for boxes 20 and 22.

9 Q Okay. And then box 16, it says,
10 "Telephone line interface."

11 Do you see that?

12 A Yes.

13 Q What function does that box serve?

14 A Well, as its name suggests, that's what
15 couples the signal produced by one of the two
16 modulators, one chosen by switch, and places that
17 signal on to the telephone line, and in the opposite
18 direction, it accepts the signal coming from the
19 telephone line and distributes it to the two
20 demodulators. There's a switch shown there at the
21 output side of the demodulator that would select one
22 of the two outputs and feed it to the DTE interface.
23 The DTE interface is the digital equipment --
24 digital terminal equipment.

25 Q So in this figure, the two sets of

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1 modulator/demodulators, they're sharing one
2 telephone line interface?

3 A Not at the same time, but yes.

4 Q And this telephone line interface would
5 be a single port?

6 A What do you mean by "single port"?

7 Q So if we look at Greszczuk -- if we
8 look at column 2, line 5, it says, Figure 1 is a
9 modem, a multimode modem.

10 And so does that tell you that the
11 telephone line interface 16 is a single port to the
12 telephone line?

13 A Well, I'm assuming what you mean by single
14 port, because this caption, Figure 1 caption, is
15 revealing exactly what I just said.

16 Figure 1 is a modem. That modem has two
17 transceivers in it -- two physically different
18 hardware transceivers inside of it along with
19 equipment that allows the appropriate modem to be
20 selected and coupled -- the appropriate transmit
21 receiver pair to be selected and coupled with the
22 DTE on one side and fed -- and coupled to the
23 telephone line on the other side, and to accept
24 digital information from the DTE on one side and
25 funnel the correct analog signal to the telephone

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1 line on the other side.

2 Q Uh-huh. Do you consider the telephone
3 line interface part of the transceiver?

4 A It's almost a peripheral question, but I
5 think if I had to form an opinion on this peripheral
6 question, I would say it's part of the transceiver.
7 It's a device and the telephone line plugs into it.

8 Q So how many transceivers do we have in
9 Figure 1, is it two or is it one transceiver?

10 A In Figure 1?

11 Q Or the Greszczuk figure.

12 A Yeah, the Greszczuk Figure 1, there are two
13 transceivers. One modem, two transceivers.

14 Q Okay.

15 A And I said the telephone line is part of the
16 modem. I didn't say it was part of the transceiver,
17 I said it was part of the modem. I wanted to be
18 sure I answered the question I thought I heard.

19 Q Right. Could you repeat that?

20 A Yeah. The telephone interface -- and, again,
21 this is a peripheral matter, but I would regard the
22 telephone line interface to be part of the modem --

23 Q Modem.

24 A -- not part of either of the two
25 transceivers, part of the modem.

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1 Q So in your interpretation, the
2 telephone line interface is not part of the
3 transceiver?

4 A It is not part of the transceiver.

5 Q So there are two totally separate
6 transceivers?

7 A Two totally separate transceivers, correct.

8 MR. REED: Okay. We can take a break
9 for lunch.

10 (Luncheon recess taken at 12:40 p.m.)

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1 A F T E R N O O N S E S S I O N

2 BY MR. SUN:

3 Q Welcome back, Doctor Acampora.

4 A Thank you.

5 Q So let's now go to the next reference
6 in your report, which was on page 127.

7 MR. SUN: And we'll mark this as
8 exhibit...

9 (Exhibit received and marked EXHIBIT 9 for
10 identification.)

11 BY MR. SUN:

12 Q This is a copy of the reference to
13 Eichen, or Eichen.

14 MR. REED: I suspect it's Eichen.

15 MR. SUN: Eichen. Okay.

16 Q So, on page 129, there's, again, a
17 discussion of how spectrum management classes are
18 disclosed by Eichen.

19 Do you see that?

20 And just take a moment to read that.

21 Okay. So I guess my first question is:
22 What in Eichen discloses spectrum management classes
23 in your opinion?

24 A A few things. So, again, this is applying
25 Brandywine's proposed construction.

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1 If I look at my report, page 129, line 9, for
2 example, Eichen discloses, "A method for qualifying
3 a twisted pair loop for a digital subscriber
4 service," which includes "determining whether the
5 digital subscriber service is spectrally compatible
6 with other services on other cabled pairs in the
7 shared binder group."

8 So, clearly, Eichen is concerned with
9 determining loop conditions and of further
10 determining whether the digital subscriber service
11 is spectrally compatible with other services that
12 share the same binder group.

13 Eichen then goes on to mention various XDSL
14 standards, and each of those includes a power
15 spectral density requirement. So at least the power
16 spectral density -- and this is all from my report,
17 by the way.

18 "At least the power spectral requirements and
19 average transmit power limitations in the various
20 XDSL standards defined requirements for data
21 equipment designed to minimize interference with
22 other nearby data transmission equipment."

23 So Eichen is about choosing or qualifying a
24 line for a particular type of DSL service accounting
25 for interference or spectrum compatibility with

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1 other services in the same cabled pair.

2 Q Okay. So spectrum management classes
3 in Eichen, are they DSL standards?

4 A That's one example.

5 Q And I know you mentioned that Eichen is
6 attempting to determine whether digital subscriber
7 services is spectrally compatible.

8 Do you know how it does that?

9 A How it does that?

10 Q Yeah.

11 A Well, we can go into this in as much detail
12 as you'd like, but in general, it's through a
13 combination of line measurements and database
14 lookup.

15 Q So in that process -- so just strike
16 that.

17 What is ultimately chose or qualified
18 in the Eichen reference?

19 MR. REED: Object as to form.

20 A Okay. So what Eichen is qualifying, Eichen
21 reads -- and this is -- I'm quoting from my own
22 report here, but I'm taking this out of -- out of
23 Eichen.

24 Eichen is disclosing the qualifying of the
25 digital loop for XDSL service, but if we look in

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1 Eichen at column 2 beginning at line 63, so the loop
2 is being qualified in the following way: "The
3 present invention" -- and, by the way, this is cited
4 in my report.

5 "The present invention satisfies those
6 desires by providing the system and method for
7 qualifying a twisted pair copper loop for digital
8 subscriber loop services. The system automatically
9 queries telecommunication provider database records
10 and/or requests measurements from network switching
11 equipment or testing systems to obtain information
12 regarding the twisted pair copper loop in question.
13 The system then determines which digital subscriber
14 loop services are available for the copper loop
15 based on the combination of all information
16 obtained."

17 So let me rephrase what I just read and put
18 it in my words.

19 Eichen is about consulting the database,
20 making line measurements, and determining which XDSL
21 services -- and he actually lists a whole bunch in
22 column 1, ADSL, VDSL, HDSL, SDSL, IDSL, RADSL. So
23 based upon the database query and line measurements,
24 determined which of these DSL services this loop can
25 support ensures that -- well, with an eye toward

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1 avoiding spectral -- avoiding interference with
2 other usages in the same binder.

3 That's what Eichen is about.

4 Q So during the qualification process,
5 does Eichen ever compare the loop -- the loop data
6 that measures against the fixed set of parameters?

7 A Well, yeah, it does.

8 Q So what is it -- where is that
9 discussed?

10 A Well, in what I just mentioned. And, again,
11 we can go on, again, in as much detail as you'd
12 like, but in the passage I just read, beginning in
13 column 2, at line 63, and ending in column 3, line
14 5, and I'm also going to include this list of DSL
15 types appearing in column 1 of Eichen and run down
16 that list.

17 Knowing the power spectrum density, power
18 levels, other attributes of these different DSL
19 services, Eichen is determining, based on the
20 particular line in question, which of these can be
21 supported in a way as to not unacceptably degrade by
22 virtue of cross talk other services being carried on
23 a different twisted pair subscriber loop in the same
24 loop -- in the same binder.

25 Q So, therefore, any opinion XDSL

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1 standards are acting as the spectrum management
2 classes in Eichen?

3 A Under Brandywine's construction, that is
4 correct.

5 Under Brandywine's construction, spectrum
6 management class, to be specific, that is correct.

7 Q Okay. Is there anything else within
8 Eichen that discloses to you spectrum management
9 classes other than the XDSL standards?

10 A Well, yes. I mentioned DSL and the alphabet
11 super of DSL types that were specifically called out
12 in column 1 of Eichen.

13 But just as an example -- and there were
14 other instances of this sprinkled throughout the
15 Eichen patent -- if we look at claim 2 of Eichen,
16 column 8, "The methods of claim 1 further comprising
17 determine whether the digital subscriber service is
18 spectrally compatible with other services on the
19 other cabled pairs in the shared binder group."

20 So I don't think that the digital subscriber
21 service being considered is necessarily limited to
22 DSL. It could be any digital subscriber service.

23 Q Uh-huh. Anything else that discloses
24 spectrum management classes?

25 A Yeah. The allowable ANSI spectrum management

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1 classes under Brandywine's construction and how
2 Brandywine has asserted its claims, I think that
3 they would all be covered.

4 Q Is that disclosed in Eichen or are you
5 just mentioning that?

6 A Well, no, I think it's disclosed in Eichen.
7 Eichen -- and here I'm going back to my report --
8 Eichen discloses qualifying -- I'm reading from my
9 report on page 130 about somewhere between line 10
10 and 11.

11 "Thus, as Eichen discloses, qualifying a
12 twisted pair loop for a digital subscriber service
13 generally, for a person skilled in the art, would
14 understand that Eichen necessarily discloses
15 qualifying the loop with respect to any standard
16 related to loop qualification for digital subscriber
17 service."

18 That's what Eichen is about, and that would
19 include -- and as I state right in my report, this
20 would include identifying allowable ANSI spectrum
21 management classes.

22 So it's clear that Eichen is concerned with
23 spectrum management. It's clear that spectrum
24 management classes that Eichen considers includes
25 the various DSL standards -- and, again, this is all

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1 under Brandywine's proposed construction and how
2 they've asserted the claims, but it would also
3 include the ANSI spectrum management classes which
4 consist of a group -- we used this phrase earlier --
5 of sets of constraints that are all -- have all been
6 proven to be spectrally compatible by means of
7 analysis and -- actually, all shown to be spectrally
8 compatible with a basis set on the basis of -- not
9 necessarily each other, we discussed earlier, but
10 with a basis set as determined by simulations and
11 calculations prescribed by -- those simulations and
12 calculations prescribed by ANSI spectrum management
13 standards.

14 Q So before the issued T1.417 standard
15 came along, there were some XDSL standards already
16 in existence, right?

17 A That's correct.

18 Q In your opinion, what does the T1.417
19 standard add over the existing XDSL standards?

20 A Can I have the standard, please?

21 MS. DAVIS: I object as to the form.

22 Q Just from your understanding. I don't
23 have the standard.

24 A Well, what do you mean by -- just ask the
25 question again.

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1 Q So why -- what did the T1.417 spectrum
2 management standard have over the existing XDSL
3 standard at the time?

4 MR. REED: Same objection.

5 A Add to what?

6 Q A function. A function. The purpose.

7 A The purpose of what?

8 Q Of the standard.

9 A You're asking what is the purpose of the
10 standard?

11 Q Correct.

12 A Okay. So that's a totally different question
13 than the earlier one when you asked something about
14 what does it add relative to something that came
15 earlier.

16 So if you're asking what is -- what is the
17 standard all about, in my words, standard is about
18 defining a basis set of services prescribing
19 calculations that get performed on a new service
20 that is being considered for use over subscriber
21 line, and on the basis of those calculations,
22 constraining the particular new service by defining
23 parameters such that if that new service is offered
24 in conformance with those parameters, with
25 99 percent confidence, there will not be

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1 unacceptable interference into any of the basis set.
2 When the next new service comes on line, or
3 let's say -- let's say when the next new service
4 comes on line, same process would need to be
5 repeated, and as the set of allowable requirements
6 develops when a new service is being offered, a
7 check could further be made -- before going through
8 these exhaustive calculations, a check can first be
9 made, does this new service conform with any of
10 these requirements?

11 If so, we already did the calculations, the
12 interference to the basis set will not be
13 unacceptable, and if the calculations have not yet
14 been done, then a new set of calculations would need
15 to be done and possibly a new class created.

16 That's what the ANSI standard does.

17 Q So the classes in the T1.417 standard,
18 they introduce additional constraints to the
19 existing DSL standards?

20 A I didn't say that.

21 Q It's not true that the T1.417 classes
22 added additional constraints, that's not --

23 A No, that's a different question. I certainly
24 didn't say that in my answer to your earlier
25 question. I said, with the new service. I didn't

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1 say, DSL service -- an existing DSL service. It
2 would be any service being considered. The new
3 service could be a proprietary service, who knows.
4 It may not be XDSL at all. Then its parameters
5 would be defined in such a way as to ensure spectrum
6 compatibility with the basis set.

7 Now, if that new service is DSL, perhaps
8 there is a constraint required and perhaps there is
9 not a constraint required. It may already fit in to
10 an existing -- an existing class or the parameters
11 in its standard may be such that they don't need to
12 be further constrained, you can simply accept that
13 the XDSL standard as defining the parameter set for
14 a class such that compatibility with the basis set
15 is ensured.

16 And you might not be constrained at all. It
17 might perfectly well fit in. In fact, if you look,
18 there's a pretty close resemblance, and if you give
19 me the standard, I could point it out to you,
20 between the spectrum management classes of the
21 standard and the DSL standards themselves. In power
22 spectrum, PSD, template, the mask, two different
23 things, and the power levels.

24 Other requirements as well, transverse
25 balance, longitudinal voltage, there are other

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1 requirements as well.

2 Q But isn't it a fact that there are
3 additional constraints in T1.417 for existing DSL
4 standards?

5 A Not necessarily.

6 Q But --

7 A In fact, in some cases, it's -- the masks are
8 looser.

9 Q But, in some cases, there are
10 additional constraints?

11 A I would have to look at the standard. You'd
12 have to show me the standard.

13 Q So you're not sure if there are
14 additional constraints added?

15 A There might be in some cases, and in some
16 cases, there are not.

17 Q So the T1.417 standard defines some
18 number of classes. Correct?

19 A That's one of the things, yes.

20 Q And you're not sure if those classes
21 define additional constraints over the existing DSL
22 standards?

23 A No, I answered it, in some cases yes, in some
24 cases no.

25 Q Okay. So why would there need to be

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1 additional constraints added to your existing DSL
2 standards?

3 MR. REED: Object as to form.

4 A Well, I could hypothesize, a new XDSL system
5 being proposed, and if we looked at the proposed PSD
6 and power and transverse -- I'll omit the list of
7 other features, but if the calculations are made on
8 this new proposed version of DSL, which might even
9 be a proprietary version, who knows, because -- and,
10 again, I'm hypothesizing -- it would be determined
11 that spectral compatibility in this 99 percent sense
12 with the basis set could not be assured.

13 But if the specifications were tightened,
14 then it would -- it might even develop that the
15 calculations are done first, then the standard for
16 this new DSL are selected to conform with the
17 requirement that unacceptable interference not be
18 created an adjacent systems.

19 Q So did I hear you say that the T1.417
20 standard tightens the constraints for existing DSL
21 systems to make them 99 percent spectrally
22 compatible?

23 MR. REED: Object as to form.

24 A No, you did not hear me say that.

25 Q So explain -- so, for existing XDSL

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1 systems, are we agreed that there's some constraints
2 added by T1.417 to the existing XDSL services?

3 A I didn't say that.

4 Q Okay. So you're not aware that, for
5 XDSL services existing at the time, you're not sure
6 that T1.417 standard added additional constraints on
7 top of that?

8 A Yeah, I don't think they did. In some cases,
9 it might have and in some cases they did not.

10 Q But you just said in some cases they
11 did, for existing XDSL services?

12 A You'd have to show me the standard. I
13 just -- I haven't memorized every version of DSL
14 what the power spectral density requirements are,
15 how that relate to the power spectral density of the
16 different classes defined by the spectrum management
17 standard, but the way, which didn't exist on the
18 patent. You'd have to show me the standard, I can't
19 go beyond that.

20 Q Okay. So you're not completely sure
21 without the standard in front of you that the T1.417
22 standard added existing constraints on top of
23 existing XDSL standards?

24 A Well, I couldn't tell you anywhere -- a
25 specific instance where it added additional

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1 constraints. It might have, but I couldn't tell you
2 in a specific instance where it did.

3 Q Okay.

4 Did you consider -- are the existing
5 XDSL standards, at the time the T1.417 was
6 published, are those XDSL standards spectrally
7 compatible?

8 A You know, you're asking for the first version
9 of the -- of T1.417 standard?

10 Q Yes. Before the first version of the
11 T1.417 standard, there's some existing XDSL
12 standards.

13 A That's correct.

14 Q Are they already spectrally compatible?

15 MR. REED: Object as to form.

16 A With what?

17 Q Each other.

18 A I don't know, but, again, that's not an issue
19 that's addressed by the standard.

20 Q Isn't it true that the T1.417 standard
21 imposed additional constraints to define spectral
22 compatibility among the existing DSL standards?

23 MR. REED: Objection. Asked and
24 answered.

25 A I don't think that -- again, the standard

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1 doesn't require spectrum compatibility among
2 different spectrum management classes, it requires
3 spectrum compatibility between each member of the
4 set of classes and the basis set.

5 Unless one of those classes were added to the
6 basis set, there's no intent, no objective of
7 ensuring compatibility among different classes
8 themselves.

9 In this 99 percent sense, once again, in
10 99 percent of installations, unacceptable
11 interference into an existing basis set will not
12 occur. Ninety-nine percent of the time it will not
13 occur.

14 Q So with this 99 percent result, could
15 that be achieved without the T1.417 standard?

16 A Sure.

17 Q So would it be ensured by the
18 definitions of existing DSL standards that there
19 would be 99 percent spectral compatibility?

20 MR. REED: Objection to form.

21 A I don't understand the question.

22 Q Huh?

23 A I don't understand the question.

24 Q So you just said the T1.417 standard
25 with the constraints that the T1.417 standard

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1 introduced, it ensures a 99 percent spectral
2 compatibility between the basis systems, right?

3 MR. REED: Object to the form.

4 A I didn't say that, no.

5 Q All right. I'm just -- what result
6 does the additional constraints in T1.417 standard
7 achieve?

8 A What additional constraints?

9 T1 -- what the standard did was create
10 classes, standardized classes, with defined
11 properties such that if the new service complies
12 with the constraints of a particular class, it is
13 guaranteed with 99 percent confidence that
14 unacceptable interference will not occur on any
15 subscriber line in the same bundle carrying one of
16 the basis services.

17 Q So you just used the word "guaranteed."

18 A With 99 percent.

19 Q So in the absence of T1.417 standard,
20 would that guarantee not exist?

21 MR. REED: Object as to form.

22 A It might.

23 Q But there's no guarantee, correct?

24 A I disagree. It might.

25 Q So what is the purpose of --

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1 A In fact, it might be better than 99 percent.

2 Q So what is the purpose of the T1.417
3 standard?

4 A Basically, it was forward looking, future.

5 A big part of the standard is the definition
6 of the calculations that must be performed in the
7 event a new service does not conform to a new system
8 class. So it was a way of basically creating and
9 expanding the set of known spectrally compatible
10 classes, not the spectrally compatible, once again
11 meaning that it's 99 percent of -- way of avoiding
12 interference to a basis system, and there's a whole
13 list of basis systems that were defined.

14 Q So you're talking about there's a
15 method A and method B in the T1.417 standard?

16 A That's right.

17 Q And method A was a class based way of
18 approving spectral compatibility?

19 A Correct.

20 Q And method B was a calculation?

21 A Calculation base, right.

22 Q Is method A unnecessary given the XDSL
23 standards definitions at the time?

24 A Is A unnecessary?

25 I wouldn't say they were necessarily

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1 unnecessary before the fact but after the fact they
2 might have been unnecessary.

3 It's entirely possible that existing DSL --
4 some existing DSL standards conformed with what
5 became class 1 and/or class 2 and/or class 3.

6 Q What do you mean when you say, "before
7 the fact," the fact --

8 A This 99 percent of -- just by running the DSL
9 at its maximum capability, PSD, power, and so forth,
10 might have resulted in a situation where 99 percent
11 of the time it was not unacceptable degradation to
12 an existing -- to any of the basis systems that were
13 defined by the standard. That might very well be
14 the case, and in which case it might also have been
15 the case that the standard body, after confirming
16 that by calculation, simply ratified that
17 preexisting standard as one of the classes.

18 Q So if the preexisting classes were
19 99 percent spectrally compatible, the classes
20 defined in the T1.417 standard would be unnecessary.

21 Do you agree with that?

22 MR. REED: Object to the form.

23 Did you finish your question correctly?

24 I think you used the wrong word.

25 A Yeah, I was going to ask you if you could

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1 repeat that, because I assume that question didn't
2 come out right.

3 MR. SUN: Could you repeat that -- read
4 that back?

5 (Stenographer reads back as requested.)

6 Q Let me rephrase the question.

7 A Yeah.

8 Q So if the preexisting DSL standards by
9 themselves were already 99 percent compatible, with
10 each other, would the classes defined in the T1.417
11 standard be unnecessary.

12 A Yes.

13 It would serve no purpose. Run the DSL,
14 don't worry, don't worry -- not don't worry about
15 it, it would have not been a reported instance of
16 unacceptable degradation except 1 percent of the
17 time.

18 Q And the T1.7 -- T1.417 standard came
19 about because people were not sure the preexisting
20 DSL standards would be 99 percent spectrally
21 compatible?

22 A Not right. Not correct.

23 Q Please correct me.

24 A Well, okay, I'm going to be repeating myself,
25 but what the intent of the ANSI standard is -- the

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1 spectral management class standard is, is to create
2 classes, some of which may conform with existing DSL
3 standards, to create classes such that if your
4 system complies with one of these standardized
5 classes, in 99 percent of the time you will not
6 unacceptably degrade a basis set, the ANSI standard
7 also defining that basis set.

8 What are the services that we're trying to
9 protect? That was the intent of the ANSI standard.

10 And there's also no requirement that anyone
11 conformed to the standard. You can -- you can --
12 these are guidelines.

13 Q So I guess let me repeat what you said.

14 So the classes are defined so that if
15 some service falls into one of these classes, it
16 would be guaranteed to not excessively interfere
17 with some list of basis services?

18 A That's sort of correct --

19 Q Okay.

20 A -- yeah.

21 Q Is there something you encountered with
22 what I just said?

23 A You'd have to repeat it again. I think you
24 were trying to paraphrase some of my earlier
25 testimony. I think you got a lot --

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1 Q Okay.

2 A -- it wasn't my exact words, but I think you
3 might have captured a lot of the intent.

4 Q Okay. So there is some classes in
5 T1.417 standard?

6 A There are.

7 Q And the -- if a service falls within
8 one of these classes, then that service is
9 guaranteed to be 99 percent spectrally compatible
10 with an existing set of basis DSL services?

11 A You understand it being the spectrally
12 compatible -- I think that was your word -- meaning
13 that 99 percent of the time that that service
14 conformed with that class will not unacceptably
15 interfere with an existing basis service.

16 Q And so with that purpose in mind, do
17 the DSL -- existing DSL standard definitions achieve
18 that purpose?

19 MR. REED: Objection as to form.

20 A At what point in time?

21 Q At the time of -- before the -- before
22 the standard was published.

23 A You mean the first version of the standard?
24 So it was the direct standard, then --

25 Q Correct.

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1 A So -- but, sequentially, it was a direct
2 standard, then the patent was filed, then there was
3 an issued standard, a ratified standard --

4 Q Yes.

5 A -- and you're asking about that first
6 ratified standard -- the first ratified standard.

7 Q Yes.

8 A And you're asking did DSL at the time -- did
9 any version of DSL conform with that first standard?
10 I believe the answer to that question is,
11 yes.

12 Q So before the standard, if we just
13 operated within the existing DSL standards, there
14 would be 99 percent spectral compatibility with the
15 existing basis systems?

16 A For some versions of DSL that existed at the
17 time, yes.

18 Q Then there's really no need for the
19 T1.417 standard?

20 A Well, I already testified the standard was
21 sort of forward looking and there were a lot of new
22 versions of DSL becoming available. And, by the
23 way, this was -- that standard was not intended only
24 for DSL, it was intended for anything you wanted to
25 do on the line just to offer you some feedback and

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1 some advice as to whether you were being a good
2 neighbor.

3 There wasn't even a requirement that any new
4 service conformed to the standard. You could be a
5 bad neighbor.

6 Q Uh-huh. Okay.

7 So I guess one purpose that this T1.417
8 standard adds over the existing DSL standards is it
9 adds in a way of constraining future systems to
10 coexist with existing DSL systems?

11 A No, it doesn't do that.

12 Q But you said it was future looking.
13 Correct?

14 A That part is true.

15 Q So the T1.417 standard is attempting to
16 protect existing DSL systems against future
17 services?

18 A That part is not true.

19 Q How would you say it?

20 A I don't know what you're driving at. That
21 statement isn't true.

22 Q What do you mean by "future" or
23 "forward looking"?

24 A Okay. Forward looking in the following
25 sense -- following senses: A, someone has this idea

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1 for a new service to be offered over a subscriber
2 line. There is a basis set of services defined by
3 the standard. Does this new service -- is this new
4 service a good neighbor? Good neighbor meaning with
5 99 percent confidence, will it not unacceptably
6 interfere with an existing basis service in the same
7 bundle as the new service.

8 What the standard did was provide, in the
9 first case, a way of addressing that question, does
10 this new service conform with one of these classes?

11 Or, second way, if it doesn't conform with an
12 existing class, here are the calculations that you
13 need to perform to establish whether what you're
14 planning to do is or is not spectrally compatible,
15 that spectral compatibility, once again, meaning not
16 unacceptably interfering with the basis service more
17 than 1 percent of the time.

18 Q So let me try to rephrase it.

19 So it's a way -- the T1.417 standard is
20 a way of blessing a new service to ensure that it
21 doesn't interfere with the predefined list of --
22 preexisting list of basis systems?

23 A That's correct.

24 Q Okay. And that is something that the
25 existing DSL standards didn't define?

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1 A What's that?

2 Q A way of blessing the new service
3 against existing DSL services -- or basis services.

4 A It may not have needed to be. It may already
5 have conformed with what became a -- I think, using
6 your word -- blessed class --

7 Q So --

8 A -- or stated otherwise, the standards body
9 might have ratified an existing DSL standard.

10 Q So even with this new purpose, there's
11 real no need for a T1.417 standard?

12 MR. REED: Objection to form.

13 A In hindsight, it may have served no -- it
14 might have served no purpose.

15 But I actually don't think that's the case,
16 but for some existing DSL, it might have provided a
17 no -- no value. The impact on basis systems with or
18 without that standard might have been -- the delta
19 impact might have been zilch.

20 Q So for that to be true, what you're
21 saying is if a new service fell into one of the
22 existing standards for DSL standard, it would -- it
23 would just automatically be spectrally compatible
24 with the basis systems?

25 A Might have happened.

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1 Q If a T1.417 standard did not add
2 anything, any sort of assurance, or -- over that,
3 or --

4 A Well, like I said, the impact, if that
5 standard had never been brought into existence, of
6 some preexisting DSL service on the basis services
7 might have been the same with or without that
8 standard.

9 Okay. With the standard -- at a minimum,
10 what the standard brought was the definition of the
11 basis set to be protected. But even there, they are
12 what they are. Without that standard ever existing,
13 those services might have already been protected by
14 an existing DSL service.

15 Q Okay. So at the very least, the
16 standard expressed an intent to protect some set of
17 basis sets?

18 A But everyone knew that there would be -- from
19 the very beginning, at a minimum, DSL protected the
20 voice band. There is no DSL operating above the
21 voice band. At a minimum, there was always an
22 intent to maintain spectral -- spectral
23 compatibility with the base band -- with the voice
24 band.

25 Q But didn't the T1.417 introduce the

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1 methodology to determine that easily?

2 A No. That was known and done well before the
3 standard.

4 Q But the actual definitions in the
5 classes didn't exist until T1.417?

6 A Well, some of them did.

7 Q And you're saying the preexisting
8 definitions were already 99 percent spectrally
9 compatible, and so the T1.417 definitions were sort
10 of superfluous?

11 A No, I didn't say that.

12 Q Can you correct what I said -- what I
13 just said?

14 A I'm not sure what you're -- what you're
15 trying to say, so no.

16 Q I guess I'm just trying to figure out
17 what -- you said "delta value."

18 What specifically was the delta value?
19 Why do people sit down to try to create the T1.417
20 standard?

21 A To create classes that, with 99 percent
22 certainty, would not unacceptably degrade a defined
23 set of basis services.

24 Now, without that standard, there was some
25 basis services for which that 99 percent

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1 guarantee -- in fact, it was probably closer to 100
2 percent, you know, because that 1 percent at the
3 time you may unacceptably degrade, maybe it was like
4 .1 percent, .01, even lower, an existing DSL service
5 would not -- would not unacceptably degrade an
6 existing basis set -- an existing member of what
7 ultimately came of basis set.

8 The specific example I gave was voice band.
9 Voice band -- preexisting voice band data services
10 that went back 50 years, maybe more, were immune to
11 ADSL, designing the ADSL standard. That
12 compatibility was there by design from day one,
13 because that voice band is going to be carried over
14 the same copper wire that carries the DSL.

15 So they were spectrally separated. DSL
16 services, you get the high band. Voice band, you
17 get the low band. And you will not mutually
18 self-destruct.

19 Q But didn't the T1.417 standard expand
20 upon voice band to add to that protected list?

21 A It did.

22 Q And that wasn't something that was done
23 before the T1.417 standard?

24 A That expansion? Well -- well --

25 Q That added protection, yeah.

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1 A That's not completely true either.

2 So there was a set that was protected
3 automatically without any standard. What the
4 standard might have done is identify some additional
5 outliers that weren't already protected and set
6 about trying to create guidelines to protect those.

7 Now, existing DSL standards at that time may
8 already have protected some of that basis set, in
9 fact, it may have protected the expanded basis set.
10 Then there were additional services, which that
11 might not have been the case, and those services
12 were then sculpted so that they would not
13 unacceptably degrade.

14 But, again, it was intended to look forward
15 primarily.

16 Q And that description is the delta add
17 over existing DSL standards in the T1.417 standards?

18 A I'm not sure what you're referring to now.

19 Q What you described with the outlier
20 cases and --

21 A No. When I used a phrase "delta" earlier,
22 what I said was the impact -- the delta impact,
23 which -- of an existing DSL service on an existing
24 basis service with or without that standard would
25 have been nearly zilch.

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1 That's what I said.

2 Q Okay.

3 MR. REED: We've been going about an
4 hour, is it about time for a break?

5 MS. DAVIS: Yes, yeah, let's take a
6 break.

7 (Recess taken at 2:34 p.m.)

8 MR. SUN: Back on the record.

9 BY MR. SUN:

10 Q Okay. So change of topic. So let's go
11 to page 144 in your report.

12 And just discussing -- this is just
13 discussing Palm and claim 1 of the '472 patent?

14 A Yes.

15 Q There's a limitation here that says,
16 "Measuring subscriber loop characteristics"?

17 A Yes.

18 Q Can you provide a plain and ordinary
19 meaning -- definition of "loop characteristics"?

20 And if you need to look at the '472
21 patent --

22 A Yeah, why don't we get a copy of that.

23 Q Okay.

24 MR. SUN: This is Exhibit 10.

25 (Exhibit received and marked Acampora 10 for

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1 identification.)

2 BY MR. SUN:

3 Q Exhibit 10 is a copy of the '472 patent
4 to Bremer and Kyees.

5 Yeah, I can represent to you this is
6 not actually a disputed statement.

7 A Well, measuring subscriber loop
8 characteristics is.

9 Q Or -- so what I'm interested in is just
10 a definition of loop characteristics.

11 A I'm not so sure that's not a -- well, I guess
12 it's not. I'm looking at both sides post
13 construction. They both include the phrase
14 "subscriber loop characteristics."

15 So I guess subscriber loop characteristics
16 per se is not in dispute.

17 Okay. And so your question is once again?

18 Q So I know it's not disputed, but having
19 conducted your analysis, you must have had some idea
20 of what loop characteristics meant to a person of
21 ordinary skill in the art.

22 And so what is -- can you explain that,
23 if you would explain it to a ten year old, what is
24 "loop characteristics"?

25 A I'm not so sure that it could be explained to

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1 a ten year old, but I'll do the best I can.

2 Q Okay.

3 A So, first of all, loop, that's the twisted
4 pair wire that connects a subscriber premises to
5 carry a plant, and there are attributes associated
6 with that loop, many attributes: The length, the
7 frequency response, the existence of bridge taps,
8 loading coils, these -- loss, impedance, balance,
9 cross talk. There are all of these, and probably
10 more that I didn't include in the list, would fall
11 under the broad understanding of loop
12 characteristics.

13 Q If they were to capture that with a
14 phrase definition instead of listing -- listing
15 these types of properties?

16 A Loop characteristics.

17 Q Okay. Okay.

18 And let's go to now page 149.

19 A What page is that?

20 Q 149 in your report.

21 And there's another element of claim
22 '472 there -- or, I'm sorry, patent '472, claim 1
23 and that's enabling the operator transceiver.

24 And I'm really just interested in the
25 word "enabling." Can you give the definition you

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1 used for enabling, what that word means?

2 A Well, for the '472 patent, the phrase
3 "enabling the operating transceiver" is a disputed
4 term. I applied both of these constructions in my
5 analysis.

6 Q What page of the construction are you
7 looking at?

8 A I'm look at page 27 of my report.

9 Unless I'm misreading something, one of the
10 disputed terms is "enabling the operating
11 transceiver."

12 Q So we're not interested in the last
13 three words, "the operating transceiver," just
14 "enabling."

15 And it appears the parties --
16 Brandywine just stuck to the word "enabling" and AT
17 & T's construction is just automated connection.

18 So if we put aside the -- that
19 "automated" part, so just ignore whether enabling
20 has to be automated or it could be nonautomated, do
21 you have a definition for what the word "enabling"
22 means?

23 MR. REED: Object as to form.

24 A In the context of this patent, the claim,
25 yes.

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1 Q So what does that mean, to enable a
2 transceiver, as part of this claim.

3 A Enabling the transceiver did you say?

4 Q Yes.

5 A Well, I guess now I'm not sure what you're
6 asking.

7 That's a term -- that's almost a complete
8 phrase in dispute.

9 I applied both constructions.

10 Q Uh-huh. So when you applied -- do you
11 believe that AT & T's construction and Brandywine's
12 construction differ on what the word "enabling"
13 means as you applied it here?

14 A Well, okay, there's an issue here.
15 Brandywine's proposed construction -- and I think
16 you even stated it before -- may not -- Brandywine
17 apparently believes that plain and ordinary meaning
18 of enabling based on its infringement contentions is
19 automatically or manually connecting.

20 Q Yeah.

21 A AT & T believes that enabling in the context
22 of enabling the operating transceiver would require
23 that this process be automated.

24 So Brandywine apparently believes that this
25 phrase should get its plain and ordinary meaning,

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1 and that plain and ordinary meaning would be
2 somewhat broader than AT & T's meaning.

3 But that is the issue that the court is being
4 asked to apply. I considered both of these, and, in
5 fact, as far as Brandywine -- as far as Palm
6 disclosing this limitation, it would be so disclosed
7 under both constructions, because in Palm it is
8 automated. Brandywine would include both.

9 Q Okay.

10 A Now, in the context of this patent, I have
11 not formed an opinion of how this phrase should be
12 properly constructed. I've offered no opinions on
13 claim construction.

14 Q So putting aside the automated and
15 nonautomated issues, you also had to just have in
16 mind what the word "enable" means or "enabling"
17 means whether or not it has to be automated or not.

18 So I'm just interested in what in your
19 mind the word "enabling" means.

20 MR. REED: Object as to form.

21 A That's precisely what I didn't do, because
22 that's a claim construction issue, and I steadfastly
23 avoided trying to interpret the words of the patent
24 as they would be understood by one of skill in the
25 art if doing so would cause me to take a position on

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1 proper construction of any disputed term.

2 So I did not do that.

3 Q Okay.

4 A And I can't do it now, unless you want me
5 to -- unless you're willing to spend a great deal of
6 time by doing that.

7 Q Okay. Let's just look at AT & T's
8 construction.

9 What does it mean to automatically
10 enable a transceiver? What do you do to enable a
11 transceiver?

12 MR. REED: Object to form.

13 This states construction.

14 A AT & T's construction did not say automated
15 enabling.

16 Q Let me rephrase it.

17 The construction is automatically
18 connecting?

19 MR. REED: You're almost there.

20 Q Automated connection of the chosen
21 hardware transceiver.

22 So how did you apply this construction?
23 What does "automated connection of the chosen
24 hardware transceiver," what does that mean?

25 A Okay. That question I think I understand.

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1 Performed by a machine entirely.

2 Q So -- okay.

3 But what does it mean to be
4 performed -- what does performed by a machine
5 entirely, what actions?

6 A Bear with me a second, I want to make sure
7 I'm not getting too much stuff out of order here.

8 I'm sorry, once again?

9 Q So what action is being performed by a
10 machine? That's what I'm asking you.

11 What is the action of enabling that you
12 applied to your analysis?

13 A Well, in the context of claim 1 of the '472
14 patent, AT & T's proposed construction to me means
15 connecting the chosen hardware transceiver with the
16 subscriber line -- no, let me restate this.

17 Using only a machine to connect the chosen
18 hardware transceiver to the subscriber line.

19 Q Okay.

20 So connecting is enabling?

21 A I didn't say that.

22 Q What did you just define there? The
23 entire phrase, enabling --

24 A Well, I think you were asking about --

25 Q AT & T's.

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1 A -- enabling the operating transceiver. I
2 thought you were asking how did I interpret AT &
3 T's proposed construction.

4 Q Uh-huh.

5 And you just read back to me AT & T's
6 construction?

7 A I did not.

8 Q Okay. Can you repeat that again?

9 Or --

10 A I think you're asking about the automated
11 connection. And I think what I said was, using only
12 a machine to connect the chosen hardware transceiver
13 to the subscriber line.

14 Q When you say, "connect," you mean
15 physically connect? Or did you mean something --

16 A Allow the signal to flow from the chosen
17 hardware transceiver to the subscriber line.

18 Q That's -- that's the understanding you
19 applied in your analysis?

20 A Doing that entirely by a machine.

21 Q Got it. Okay.

22 One last thing. Can you turn to
23 page 7?

24 A Page?

25 Q Seven of your report?

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1 A Seven.

2 Q Do you see under anticipation there's a
3 sentence that says, "Understand that patent claims
4 are presumed valid and can be determined to be
5 invalid only if based on clear and convincing
6 evidence."

7 Do you see that?

8 A What line are you looking at? I was trying
9 to follow you.

10 Q Page 7, line 10.

11 A Yes.

12 Q Okay. And that's the standard you
13 applied throughout your report, the clear and
14 convincing evidence standard?

15 A Well, yes, I did.

16 Q Okay. If you look at now page 10, the
17 bottom, starting from the line 27 on page 10.

18 Here it's talking about the law of
19 indefiniteness, and this is the law of
20 indefiniteness that you applied in your report. Is
21 that right?

22 A Well, you characterize it as being a law of
23 indefiniteness --

24 Q Or --

25 A -- what I was -- I'm not a lawyer. You asked

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1 me about that earlier.

2 Q Sure.

3 A What I did was I was provided with some legal
4 guidelines --

5 Q Okay.

6 A -- to be followed in forming my opinions.
7 That's what I did.

8 Q Okay. So these are legal guidelines
9 that you followed in your indefiniteness analysis,
10 correct?

11 A That's correct.

12 Q Okay. So just look at page 10 starting
13 at 27.

14 Let me know when you're done.

15 A I'm done.

16 Q Okay. So do you understand there's a
17 distinction between patent board decisions and U.S.
18 District Court decisions?

19 Do you understand that?

20 MR. REED: Object as to form.

21 A Well, I don't have any understanding of that
22 one way or the other. I was given these guidelines
23 to follow.

24 Q Okay. Do you know that the patent
25 board is making its decision during examination of

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1 patent claims, while invalidate a patent, the
2 District Court is making a decision after the patent
3 has issued?

4 A That's my understanding.

5 Q Okay. Do you know if the patent
6 board's decisions are employing the clear and
7 convincing standard?

8 MR. REED: Object to the form.

9 A Board's decisions.

10 Whatever the patent board does is -- my
11 understanding of what they -- the board does as a
12 procedure, as an examiner, as a supervisor, is an
13 appeals process, and based upon what art, what other
14 circumstance might be considered by the examiner, or
15 the patent office, let's say, it decides whether it
16 believes that a claim as written is allowable or
17 not.

18 Q Okay. So when a patent board issues a
19 decision to reject a claim under examination, is it
20 employing the clear and convincing standard?

21 MR. REED: Objection. Calls for a
22 legal conclusion.

23 A Yeah, I don't have an opinion on that. I --
24 I -- I can't answer that question.

25 Q Okay. So you don't know if this

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1 paragraph of guideline that you used is using the
2 clear and convincing standard?

3 A Well, the answer to your question is no, but
4 I would read this as being, in this one instance,
5 maybe being even a higher barrier than clear and
6 convincing.

7 And, by the way, we spoke about this earlier,
8 I had some opinions on -- and this is the '508
9 patent, where the claim reads, as defined by a
10 standard -- I believe that's the language, but I can
11 check that to make certain -- and at that time it's
12 not the question of, well, what standard existed,
13 did I apply this patent board's consideration or not
14 in my analysis, and I certainly was aware of this
15 patent board rule, but in that particular instance
16 there was no standard whatsoever. There was no
17 standard.

18 So it's not a case that the patent is limited
19 to a standard that existed on the date it was filed,
20 that appears to be what the patent board's rule
21 would require, but in the case of the '508 patent,
22 in fact, there was no standard on spectrum
23 management, or spectrum management class.

24 There was the draft standard, but that's it.

25 Q But in your analysis of indefiniteness,

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1 you are relying on this patent board decision?

2 A Well, I'm not sure that's quite right. I did
3 not independently determine whether the phrase
4 "spectrum management class" is indefinite. I simply
5 applied two sides' proposed construction. AT & T
6 said it's indefinite.

7 And -- just bear with me for a moment.

8 So in regard to that limitation in claim
9 '508, including -- which included spectrum
10 management class, my analysis basically looked at
11 Brandywine's proposed construction now
12 independently.

13 I did offer an opinion on page 34 of my
14 report that the asserted claims of the '501 patent
15 are indefinite, and I give the reason why. "Each of
16 those claims includes limitations directed to
17 various components involving the 'spectrum
18 management classes defined by a standard' or similar
19 language," I said '501 patent.

20 "In my opinion, this phrase renders the
21 asserted claims 'not amenable to construction' or
22 'insolubly ambiguous' as the claims fail to
23 delineate the scope of the invention using language
24 that adequately notifies the public of the
25 patentee's right to exclude."

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1 And I just testified, and now I'm reading
2 back from my report. As discussed in section 9.A.1
3 of my report, the applicants admit that, as of the
4 filing date, the contents of the finalized ANSI
5 standard were unknown. Yet, also state that the
6 present invention is capable of being utilized to
7 determine the appropriate spectrum management class
8 or classes defined in the aforementioned American
9 National Standard of Telecommunications."

10 So on the basis of that I formed an opinion:
11 The scope of the claims are indefinite. They depend
12 on both the existence and the specified content of
13 the ANSI standard that did not yet exist at the
14 moment.

15 And I believe the applicants even said they
16 would be subject to change. If one does not know
17 the actual contents of the standard, then I don't
18 see how one could determine the bounds of the claim
19 this particular apparatus, infringing or not
20 infringing, without knowing the criteria to apply.
21 It just wasn't known.

22 Q Okay. So on that basis you think it's
23 indefinite?

24 A That's correct.

25 Q Okay.

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1 MR. SUN: That's all I have.

2 MR. REED: I have no questions. I want
3 a copy and I would also like a rough.

4 MR. SUN: I wanted the rough as well,
5 yes, yes expedited. Thank you.

6 (Concluded at 3:23 p.m.)

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CERTIFICATE OF OFFICER

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I, THERESA L. TIERNAN, A Notary Public and
Certified Court Reporter, do hereby certify that prior
to the commencement of the examination,

ANTHONY ACAMPORA

was sworn by me to testify the truth, the whole truth
and nothing but the truth.

I DO FURTHER CERTIFY that the foregoing
is a true and correct transcript of the testimony as
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place and on the date herein before set forth.

I DO FURTHER CERTIFY that I am neither a
relative nor employee nor attorney nor counsel of any
of the parties to this action, and that I am neither a
relative nor employee of such attorney or counsel, and
that I am not financially interested in the action.



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